Charles Marmor II
CP2-4D09

1/22/03

Chuck:

Attached are the results to your request regarding a method for measuring temperature with a medical device.

Because of the large number of hits in all the literature, I printed out information for only those items that appeared at least moderately relevant; titles for the remaining items are attached for your review.

I'm not convinced I found anything relevant aside from the article from the web (appeared in the May 1998 issue of Sensors). This is the article that at least part of the application appears to have been lifted from.

If you'd like this search reworked in any way, please don't hesitate to contact me at 305-8587 or Julie.walko@uspto.gov.

Sincerely,

Julie Walko
CP2 2C08

Access DB# 84674

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: ~~Charles~~ Chuck Marmor II Examiner #: 74438 Date: 1/17/03
Art Unit: 3736 Phone Number 305-3521 Serial Number: 09/882,126
Mail Box and Bldg/Room Location: CP2 4D09 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.

****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method for Measuring Temperature with Medical Device Having a Position Sensor

Inventors (please provide full names): Assaf Govari

Earliest Priority Filing Date: 6/15/2001

For Sequence Searches Only Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.

Method for measuring temperature at a site within the patient using a position sensor on a medical device. An AC magnetic field is generated to activated the position sensor. The magnetic field causes a voltage pulse to be ~~measured~~ generated within the position sensor which is measured. A resistance value is determined using the temperature measurement signal generated by the magnetic field and the voltage (see Pg 25 Ln 13). The temperature value is determined by the algorithm at Pg 25 Ln 16 based on the resistance value.

The position sensor preferably is a core of Wiegand material surrounded by a winding of copper wire. The Wiegand material is an alloy of Cobalt, Vanadium & Iron - or - an alloy of Copper, Nickel, & Iron

aka vicalloy

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STAFF USE ONLY		Type of Search		Vendors and cost where applicable	
Searcher:	J. L. Walko	NA Sequence (#)		STN	
Searcher Phone #:	305-8587	AA Sequence (#)		Dialog	✓
Searcher Location:	CP2-2C08	Structure (#)		Questel/Orbit	
Date Searcher Picked Up:	1/21/03	Bibliographic	✓	Dr.Link	
Date Completed:	1/22/03	Litigation		Lexis/Nexis	
Searcher Prep & Review Time:	131m	Fulltext	✓	Sequence Systems	
Clerical Prep Time:		Patent Family		WWW/Internet	✓
Online Time:	69m	Other		Other (specify)	

~~601K~~
A61B
600/549

PTO-1590 (8-01)

Web - 15

2:50 - 3:15 3:20 - 4:55 1:35 - 3:35

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TOC

Wiegand Effect Sensors Theory and Applications

The Wiegand effect, which refers to the generation of an electrical pulse in a coil wrapped around or located near a Wiegand wire subjected to a changing magnetic field, can be used in a variety of sensing applications.

David J. Dlugos, HID Corp.

After 40 years of research, John R. Wiegand discovered a way to cause the magnetic fields of specially processed, small-diameter ferromagnetic wire to suddenly reverse, generating a sharp uniform voltage pulse. Sensors based on the proprietary, patented Wiegand effect require only a few simple components to produce Wiegand pulses. These sensors consist of a short length of Wiegand wire, a sensing coil, and alternating fields, generally derived from small permanent magnets.

The Wiegand Effect

Wiegand wire is produced by cold-working a 0.010 in. (1 mil) dia. ferromagnetic wire made of Vicalloy, a mixture of cobalt, iron, and vanadium. The cold-working process consists of increasing amounts of twist and de-twist of the wire under applied tension in several steps. The wire is then age-hardened to hold in the tension built up during the cold-working process. This procedure causes the Wiegand wire to have a soft magnetic center, the *core*, and a work-hardened surface with a higher magnetic coercivity, the *shell*. When an alternating magnetic field of proper strength is applied to the Wiegand wire, the core's magnetic field will switch polarity and then reverse again, causing a Wiegand pulse to be generated.

See p. 17 of patent app

In other words, the patented cold-working process that produces the Wiegand wire permanently locks in the ability to exhibit Barkhausen jump discontinuities in the material. To achieve magnetic switching, the wire is put in the presence of alternating longitudinal magnetic fields. The resultant hysteresis loop contains large discontinuous jumps known as Barkhausen discontinuities that occur due to shell and core polarity switching.

The magnetic switching action of the Wiegand wire induces a

voltage across the pickup coil lasting ~10 μs (see Figure 1). It is important to understand that the induced voltage amplitude is not totally dependent on excitation field strength and orientation. It is actually the alternating positive and negative magnetic fields of equal saturating strength that are used to magnetize and trigger the Wiegand wire. These alternating magnetic fields are typically produced by magnets affixed to rotating or moving equipment, by a stationary read head and moving Wiegand wires, or by an AC-generated field.

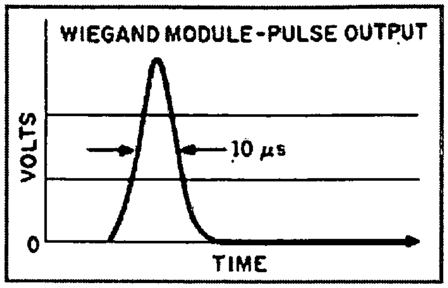

Figure 1. The amplitude of a typical Wiegand pulse will vary with the style of sensor, but the pulse width will generally remain the same.

Many applications are feasible because the Wiegand effect is operational at temperatures from -80°C to 260°C. The functional temperature range of each sensor is typically a factor of the limitations of various component subparts of the individual sensor, not the Wiegand wire itself.

There are two modes of magnetic excitation of the Wiegand effect, *symmetric switching* and *asymmetric switching*. In symmetric switching (see Figure 2), alternating positive and negative magnetic fields of equal strength are used to magnetize and trigger the Wiegand wire. First, a saturating magnetic field of one polarity orients the core and shell polarities in the same direction (A). Due to the movement of the magnets, this magnetic field is replaced by an opposite field of equal strength. As the strength of this opposing field increases, the Wiegand wire core switches polarity (B), and produces a large voltage pulse. As the magnetic field increases further, the shell of the Wiegand wire switches polarity (C), producing a much smaller pulse of the same polarity. The pulse is often not visible on an oscilloscope when compared to the large pulse produced by the core. This opposite magnetic field then fully saturates the Wiegand wire (D). At this point, the magnetic field changes back to its original polarity, causing the core to again switch polarity (E), producing a large voltage pulse in the sensing coil. Then, as the magnetic field strength increases, shell switching occurs and produces a

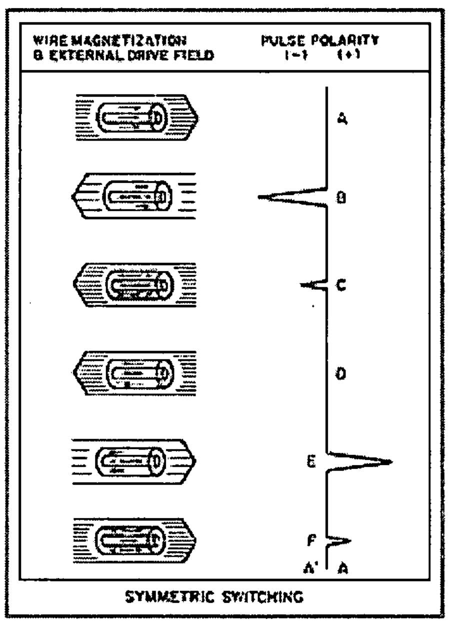

Figure 2. Symmetric switching of Wiegand wire occurs when alternating positive and negative magnetic fields of equal strength are used to magnetize and trigger the wire.

much smaller pulse of the same polarity. This pulse is often not visible on the oscilloscope when compared to the large pulse produced by the core.

In the asymmetrical switching mode, the Wiegand wire is magnetized and triggered by magnetic fields of opposite polarity but unequal strength (see Figure 3). A saturation field first magnetizes both the core and the shell in one direction (A). Then the second, less powerful magnetic field of the opposite polarity switches the magnetization of the core, but not the shell. This produces a low-amplitude pulse in the sensing coil (B). The saturating field is then reintroduced, causing the core to again switch the polarity of its magnetization, producing a larger pulse in the sensing coil (C).

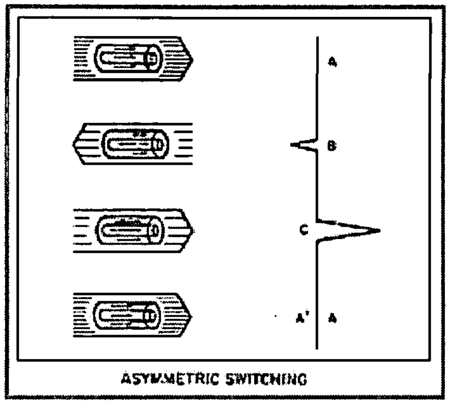

Figure 3. Asymmetric switching of Wiegand takes place when the wire is magnetized and triggered by magnetic fields of opposite polarity but unequal strength.

In most Wiegand effect applications symmetrical switching is recommended because it is the easiest to produce with most permanent magnets.

Using the Wiegand Effect

Magnetic Actuated Sensor. One of the most common applications of a Wiegand effect sensor is as a rotational counting pulser. The sensor consists of a short piece of Wiegand wire inside a pickup coil with magnetic field concentrators. The sensor is activated by applying alternating poles of a permanent magnet to the sensor in one of three orientations (see Figure 4). The air gap between the sensor and the magnet can be as much as 1 in., depending on the strength of the magnet. The output of this sensor is typically, a 5-6 V, 10 μs pulse width into a load of 24,000 □. A wide variety of magnets can be used, from simple bar types to multipole ring magnets. These sensors will produce a positive or negative voltage pulse depending on which magnetic pole (north or south) triggers the sensor.

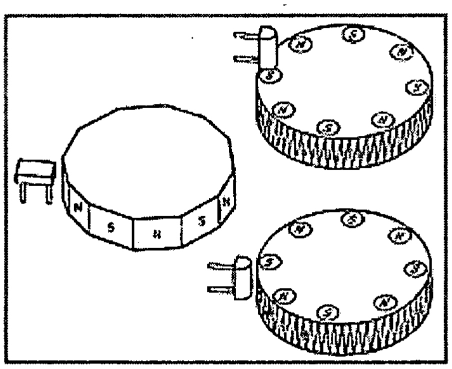

Figure 4. Permanent magnets can be used in three ways to activate Wiegand sensors.

Read Head and Wiegand Wire. Another way of making a rotary pulser is to use a stationary magnetic read head and to embed the Wiegand wires in a drum. The

wires would then rotate through the fixed magnetic field (see Figure 5). The output of this type of sensor would be ~2 V, 10 µs pulse width, into a 24,000 □ load. This method produces a lower voltage pulse than the magnet-actuated sensor previously described, due to the pickup coil's being in the read head and not wound around the Wiegand wire. The air gap of this type of sensor is ~0.050 in. The sensor's main advantage lies in its ability to indicate direction of rotation. In one direction, it will produce all positive pulses; in the other direction, all negative pulses.

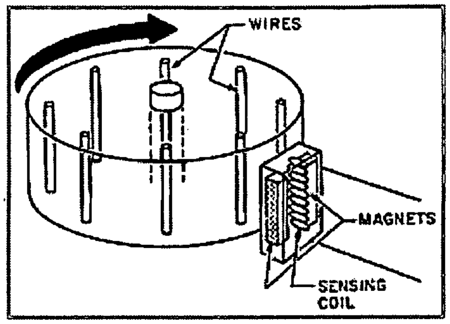

Figure 5. A rotary sensor can be made using a stationary magnetic read head and embedding the Wiegand wires in a drum. The wires rotate through the fixed magnetic field.

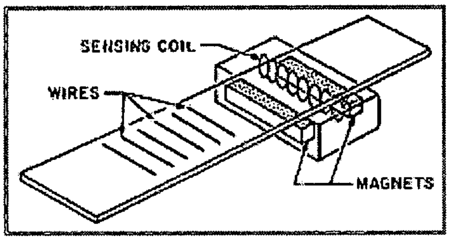

Figure 6. In a linear Wiegand sensor, the Wiegand wire passes by the read head and produces positive pulses in one direction and negative pulses in the opposite direction.

The Wiegand read head can also be used as a linear pulser (see Figure 6). The Wiegand wires could be arranged in a code pattern to give a reference value to the object being passed by the read head.

AC-Generated Field. Instead of permanent magnets, electromagnetic fields can be used to trigger the Wiegand wire. This operation can be as simple as winding a coil around a Wiegand sensor (see Figure 7) and applying an alternating current or as elaborate as making an electromagnet to trigger the sensor.

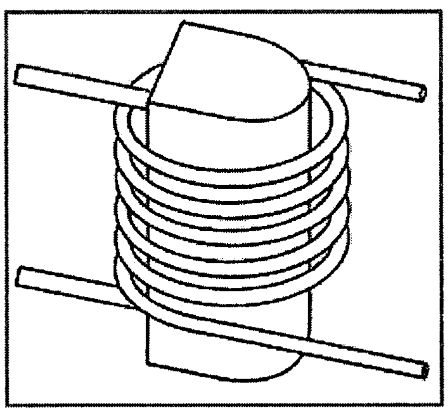

Figure 7. Alternating current fields can be used to trigger the Wiegand wire. In this example, a coil wound around a Wiegand sensor is powered by the AC field.

Current Applications. Wiegand effect sensors are used in water, gas, and electric meters for electronic indexing. They also have many automotive applications such as antilock braking, speed sensing, and position indicators. They have been used in anemometers and other wind speed applications, machine controls, shaft speed sensing, and numerous rotational counting applications.

Dave Dlugos is Manager-Marketing Services, HID Corp., 333 State St., North Haven, CT 06473; 800-243-2563 or 203-287-9000, fax 203-407-5990, ddlugos@prox.com or www.hidcorp.com. Or contact **Eric Widlitz**, Sales Engineer, HID Corp., 800-243-2563, ewidlitz@prox.com

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Inventor Search

4/5/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01516331
Medical device with a position sensor
Medizinische Vorrichtung mit einem Positionssensor
Dispositif medical avec un capteur de position
PATENT ASSIGNEE:
Biosense, Inc., (1910475), One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933-7003, (US), (Applicant designated States: all)
INVENTOR:
Govari , Assaf, Vitzo 1, Haifa 34400, (IL
LEGAL REPRESENTATIVE:
Mercer, Christopher Paul et al (46611), Carpmaels & Ransford 43, Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1266614 A1 021218 (Basic)
APPLICATION (CC, No, Date): EP 2002254182 020614;
PRIORITY (CC, No, Date): US 882127 010615
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61B-005/06; G01B-007/004; G01V-003/08

ABSTRACT EP 1266614 A1
A medical device and position sensor combination for use in medical applications comprises a position sensor having a core made of a high permeable material . The core material is made of a Wiegand effect material comprising a mixture of cobalt, vanadium, and iron. The position sensor has an outer diameter of approximately 0.4mm and is used in a medical device having an outer diameter of approximately 0.67mm.
ABSTRACT WORD COUNT: 69
NOTE:
Figure number on first page: 1B

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021218 A1 Published application with search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200251	475
SPEC A	(English)	200251	6939
Total word count - document A			7414
Total word count - document B			0
Total word count - documents A + B			7414

4/5/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01516330
Method and system for measuring temperature **and of adjusting for** temperature **sensitivity with a medical device having a position sensor**

the Patent

Verfahren und System zur Temperaturmessung und zur Temperaturempfindlichkeitseichung bei einer medizinischen Vorrichtung mit Positionssensor
Procede et systeme de mesure de temperature **et d'ajustement de la**

sensibilite a la temperature **dans un dispositif medical ayant un senseur de position**
PATENT ASSIGNEE:
Biosense, Inc., (1910475), One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933-7003, (US), (Applicant designated States: all)
INVENTOR:
Govari , Assaf, Vitzo 1, Haifa 34400, (IL
LEGAL REPRESENTATIVE:
Mercer, Christopher Paul et al (46611), Carpmaels & Ransford 43, Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1266610 A2 021218 (Basic)
APPLICATION (CC, No, Date): EP 2002254181 020614;
PRIORITY (CC, No, Date): US 882126 010615
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61B-005/00; G01K-013/00

ABSTRACT EP 1266610 A2
A method for measuring **temperature** and of adjusting for **temperature** sensitivity of a medical device having a position sensor comprises the steps of providing a medical device having a position sensor and measuring voltage at the position sensor. A resistance value is then determined from the measured voltage and a **temperature** value at the position sensor is determined based on the resistance value. The **temperature** value is determined using the position sensor. Accordingly, **temperature** is directly measured and monitored using the position sensor itself. Additionally, a sensitivity is determined at the position sensor based on the **temperature** . Location information from the position sensor is adjusted based on the sensitivity.
ABSTRACT WORD COUNT: 110
NOTE:
Figure number on first page: NONE

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021218 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200251	530
SPEC A	(English)	200251	6938
Total word count - document A			7468
Total word count - document B			0
Total word count - documents A + B			7468

4/5/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01516327
Position sensor having core with high permeability material
Positionssensor mit einem Kern, der aus Material mit hoher Permeabilitat besteht
Capteur de position avec noyau ayant une haute permeabilite
PATENT ASSIGNEE:
Biosense, Inc., (1910475), One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933-7003, (US), (Applicant designated States: all)
INVENTOR:
Govari , Assaf, Vitzo 1, Haifa 34400, (IL

LEGAL REPRESENTATIVE:
Mercer, Christopher Paul et al (46611), Carpmaels & Ransford 43, Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1266613 A1 021218 (Basic)
APPLICATION (CC, No, Date): EP 2002254174 020614;
PRIORITY (CC, No, Date): US 882125 010615
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: A61B-005/06; G01P-003/481; G01D-005/14
ABSTRACT EP 1266613 A1
A position sensor for a medical device comprises a core made of a high permeable material such as Wiegand effect material comprising a mixture of cobalt, vanadium, and iron. The position sensor has an outer diameter of approximately 0.4 mm and is used in a medical device having an outer diameter of approximately 0.67 mm.
ABSTRACT WORD COUNT: 56
NOTE:
Figure number on first page: NONE

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021218 A1 Published application with search report
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200251	448
SPEC A	(English)	200251	6941
Total word count - document A			7389
Total word count - document B			0
Total word count - documents A + B			7389

4/5/4 (Item 4 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01132357
Miniaturized position sensor
Miniaturpositionsfuhler
Palpeur de position miniaturise
PATENT ASSIGNEE:
Biosense, Inc., (1910474), One Johnson & Johnson Plaza, New Brunswick, NJ 08933, (US), (Applicant designated States: all)
INVENTOR:
Govari , Assaf, 21 Dr. Tsiffer Street, Kiryat Haim 26272, (IL
LEGAL REPRESENTATIVE:
Mercer, Christopher Paul (46611), Carpmaels & Ransford 43, Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 989384 A2 000329 (Basic)
EP 989384 A3 010829
APPLICATION (CC, No, Date): EP 99307530 990923;
PRIORITY (CC, No, Date): US 160063 980924
DESIGNATED STATES: DE; ES; FR; GB; IT; NL
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: G01B-007/004

ABSTRACT EP 989384 A2
A miniature coil assembly for transmitting or receiving magnetic waves comprises a plurality of coils wherein each coil has a respective axis. The coil assembly is assembled such that at least two of the axes are mutually linearly independent, and such that all of the plurality of

coils are contained within a volume having a cross-sectional area less than 1.0 mm2). At least two of the coils are photolithographic coils.
ABSTRACT WORD COUNT: 71
NOTE:
  Figure number on first page: 3

LEGAL STATUS (Type, Pub Date, Kind, Text):
 Search Report: 010829 A3 Separate publication of the search report
 Application: 20000329 A2 Published application without search report
 Examination: 020417 A2 Date of request for examination: 20020201
LANGUAGE (Publication,Procedural,Application): English; English; English
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200013	250
SPEC A	(English)	200013	3993
Total word count - document A			4243
Total word count - document B			0
Total word count - documents A + B			4243

4/5/5 (Item 5 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00438566 **Image available**
PRESSURE-SENSING STENT
EXTENSEUR DE DETECTION DE PRESSION
Patent Applicant/Assignee:
  BIOSENSE INC,
  GOVARI Assaf,
  FENSTER Maier,
Inventor(s):
  GOVARI Assaf,
  FENSTER Maier
Patent and Priority Information (Country, Number, Date):
  Patent: WO 9829030 A1 19980709
  Application: WO 97IL447 19971231 (PCT/WO IL9700447)
  Priority Application: US 9734701 19970103
Designated States: AL AM AT AT AU AZ BA BB BG BR BY CA CH CN CU CZ CZ DE DE DK DK EE EE ES FI FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Main International Patent Class: A61B-005/02
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 10348

English Abstract
This invention is an implant apparatus for measuring a fluid flow in the body of a subject, including a stent (24) having a generally cylindrical radial outer wall, and a central lumen (34). A flow parameter sensor (28, 30) is fixed to the stent, and measures a parameter relating to a rate of blood flow through the stent (24). A transmitter transmits signals responsive to the measured parameter to a receiver outside the body.

Set	Items	Description
S1	67	AU='GOVARI':AU='GOVARI ASSAF'
S2	5	S1 AND TEMPERATURE? ?
S3	5	IDPAT (sorted in duplicate/non-duplicate order)
S4	5	IDPAT (primary/non-duplicate records only)

? show files

File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)
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File 348:EUROPEAN PATENTS 1978-2003/Jan W03
(c) 2003 European Patent Office

File 349:PCT FULLTEXT 1979-2002/UB=20030116,UT=20030109
(c) 2003 WIPO/Univentio

File 350:Derwent WPIX 1963-2002/UD,UM &UP=200303
(c) 2003 Thomson Derwent

File 371:French Patents 1961-2002/BOPI 200209
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Biblio
Patents

13/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014957049 **Image available**
WPI Acc No: 2003-017563/200301
Related WPI Acc No: 2001-528332; 2001-529602; 2001-662445
XRAM Acc No: C03-004178
XRPX Acc No: N03-013449

Tissue lifting device for use in surgical procedures, comprises shaft, protruding members separated by interstitial lysing segment(s), and energy source for providing energy to targeted tissue

Patent Assignee: PEARL TECHNOLOGY HOLDINGS LLC (PEAR-N)
Inventor: DA SILVA L B; WEBER M R; WEBER P J
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20020128648	A1	20020912	US 99475635	A	19991230	200301	B
			US 2000478172	A	20000105		
			US 2000588436	A	20000606		
			US 2000749497	A	20001222		
			US 200137053	A	20011231		

Priority Applications (No Type Date): US 200137053 A 20011231; US 99475635 A 19991230; US 2000478172 A 20000105; US 2000588436 A 20000606; US 2000749497 A 20001222

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20020128648	A1		8	A61B-018/14	CIP of application US 99475635
					CIP of application US 2000478172
					CIP of application US 2000588436
					CIP of application US 2000749497
					CIP of patent US 6391023

Abstract (Basic): US 20020128648 A1

NOVELTY - A tissue lifting device comprises a shaft (10) and protruding members (30) provided on a distal end of the shaft. The protruding members are separated by interstitial lysing segment(s) (20) which is flushed with or protrudes relative to the protruding members. The lysing segment and the protruding members form a tip configured to separate tissue. in a plane. An energy source is included for providing energy to the targeted tissue.

USE - For use in surgical procedures.

ADVANTAGE - The inventive device requires minimal external incisions, enhances accuracy, and reduces inadvertent consequences while permitting quick and safe separation of tissue planes.

DESCRIPTION OF DRAWING(S) - The figure shows a partial top view of the distal tip of the tissue-lifting device.

Shaft (10)
Lysing segment (20)
Protruding members (30)
pp; 8 DwgNo 1/5

Title Terms: TISSUE; LIFT; DEVICE; SURGICAL; PROCEDURE; COMPRISE; SHAFT; PROTRUDE; MEMBER; SEPARATE; INTERSTITIAL; LYSE; SEGMENT; ENERGY; SOURCE; ENERGY; TISSUE
Derwent Class: A96; P31; S05; V07
International Patent Class (Main): A61B-018/14
International Patent Class (Additional): A61B-018/18
File Segment: CPI; EPI; EngPI

13/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014508772 **Image available**
WPI Acc No: 2002-329475/200236
XRAM Acc No: C02-095140
XRPX Acc No: N02-258637

Blade used in medicine comprises a blade body consisting of diamond and an electrical function element in or on the blade body

Patent Assignee: GFD-GES DIAMANTPRODUKTE MBH (GFDD-N)
Inventor: ERTL S; FLOETER A; GLUCHE P; KOHN E
Number of Countries: 096 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200211628	A1	20020214	WO 2001EP8294	A	20010718	200236	B
DE 10038015	A1	20020221	DE 1038015	A	20000804	200236	
AU 200189683	A	20020218	AU 200189683	A	20010718	200244	

Priority Applications (No Type Date): DE 1038015 A 20000804
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200211628	A1	G	31	A61B-017/32	
DE 10038015	A1			A61B-018/08	
AU 200189683	A			A61B-017/32	Based on patent WO 200211628

(WO 200211628) Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

Abstract (Basic): WO 200211628 A1

NOVELTY - Blade (1) comprises a blade body (8) and at least one electrical function element in or on the blade body.

The blade body consists at least partly of diamond and has electrically conducting diamond regions as the electrical function element.

DETAILED DESCRIPTION - Preferred Features: The function element is a **resistance** heating element, a feed line (4), an electrical, chemical and/or physiological electrode, a monopolar or bipolar coagulation electrode, a heating element/ **temperature sensor** combination, a **temperature sensor** (3), a Hall **sensor** for **magnetic** field measurement, a chemosensitive component, e.g. an ion-sensitive field effect transistor or a pH-dependent **resistance** , a piezoresistive **sensor** , e.g. a pressure **sensor** , force **sensor** or acceleration **sensor** , a radiation **sensor** , e.g. for UV, X-ray or gamma-radiation, or a flow **sensor** .

USE - Used in medicine, especially microsurgery, endoscopy, minimal invasive surgery, and general surgery, e.g. as a lancet in eye surgery.

ADVANTAGE - The blade body is biocompatible.

DESCRIPTION OF DRAWING(S) - The drawing shows a heatable blade with a monolithically integrated temperature sensor.

blade (1)
temperature sensor (3)
feed line (4)
blade body (8)
pp; 31 DwgNo 1/4

Title Terms: BLADE; MEDICINE; COMPRISE; BLADE; BODY; CONSIST; DIAMOND;
  ELECTRIC; FUNCTION; ELEMENT; BLADE; BODY
Derwent Class: L02; L03; P31; P32; S05; X25
International Patent Class (Main): A61B-017/32; A61B-018/08
International Patent Class (Additional): A61B-018/04; A61F-009/013;
  B26B-011/00; B26B-021/58; B26D-007/27; H05B-003/14
File Segment: CPI; EPI; EngPI

13/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010168085 **Image available**
WPI Acc No: 1995-069338/199510
XRPX Acc No: N95-054878
Magnetic resonance imaging appts - controls current or voltage applied to heater according to temp detected by sensor to maintain temp of magnetic field generator
Patent Assignee: HITACHI MEDICAL CORP (HITR)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 6343616	A	19941220	JP 93137576	A	19930608	199510	B

Priority Applications (No Type Date): JP 93137576 A 19930608
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 6343616	A		9	A61B-005/055	

Abstract (Basic): JP 6343616 A

The magnetic resonance imaging apparatus includes a control unit and heat insulation material (111) which covers the magnetic field generator (10) circumferentially. A heater (112) is fixed along the opposite face of the heat insulation material. Second heat insulation material (113) is fixed on the outside face of this heater.

A **temperature** **sensor** is provided at the predetermined spot at the heater surface. According to the **temperature** measured by the **sensor** , the **voltage** or current applied to the heater is controlled through a control unit to maintain the **magnetic** field generator at an uniform **temperature** .

ADVANTAGE - Maintains constant temp of magnetic field generator. Improves control accuracy. Prevents irregular temperature distribution. Provides good magnetic resonance image without distortion.

Dwg.1/9

Title Terms: MAGNETIC; RESONANCE; IMAGE; APPARATUS; CONTROL; CURRENT;
  VOLTAGE; APPLY; HEATER; ACCORD; TEMPERATURE; DETECT; SENSE; MAINTAIN;
  TEMPERATURE; MAGNETIC; FIELD; GENERATOR
Derwent Class: P31; S01; S03; S05
International Patent Class (Main): A61B-005/055
International Patent Class (Additional): G01R-033/38; H01F-007/02
File Segment: EPI; EngPI

13/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

009091106 **Image available**
WPI Acc No: 1992-218528/199227

XRPX Acc No: N92-165944

Multichannel device for measurement of weak and temporarily spacially varying magnetic fields - uses squid magnetometers mounted in helium filled support shell with supported connections to room temperature electronics

Patent Assignee: NEUROMAG OY (NEUR-N); NEUROMAG LTD (NEUR-N)
Inventor: AHONEN A I; KNUUTILA J E T; SIMOLA J T A; VILKMAN V A
Number of Countries: 016 Number of Patents: 011
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 492262	A2	19920701	EP 91121130	A	19911210	199227	B
CA 2057466	A	19920622	CA 2057466	A	19911210	199237	
FI 9006340	A	19920622	FI 906340	A	19901221	199239	
FI 89416	B	19930615	FI 906340	A	19901221	199328	
US 5243281	A	19930907	US 91807149	A	19911213	199337	
EP 492262	A3	19930804	EP 91121130	A	19911210	199507	
EP 492262	B1	19960911	EP 91121130	A	19911210	199641	
DE 69122067	E	19961017	DE 622067	A	19911210	199647	
			EP 91121130	A	19911210		
ES 2091277	T3	19961101	EP 91121130	A	19911210	199650	
JP 3038070	B2	20000508	JP 91338476	A	19911220	200027	
CA 2057466	C	20010508	CA 2057466	A	19911210	200129	

Priority Applications (No Type Date): FI 906340 A 19901221
Cited Patents: No-SR.Pub; EP 200958; EP 361137; WO 9102259
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 492262	A2	E	10	G01R-033/035	
Designated States (Regional): AT BE CH DE DK ES FR GB IT LI NL SE					
CA 2057466	A			G01R-033/035	
FI 9006340	A			G01R-033/035	
FI 89416	B			G01R-033/035	Previous Publ. patent FI 9006340
US 5243281	A		9	G01R-033/035	
EP 492262	A3			G01R-033/035	
EP 492262	B1	E	12	G01R-033/035	
Designated States (Regional): AT BE CH DE DK ES FR GB IT LI NL SE					
DE 69122067	E			G01R-033/035	Based on patent EP 492262
ES 2091277	T3			G01R-033/035	Based on patent EP 492262
JP 3038070	B2		7	G01R-033/035	Previous Publ. patent JP 4315075
CA 2057466	C	E		G01R-033/035	

Abstract (Basic): EP 492262 A

The multi-channel device contains several SQUID magnetometers or gradiometers in a vacuum insulated vessel with sensors (12) with several measurement channels including SQUID and flux transformers mounted on connection modules (6) which follow the shape of the head. The sensors are connected to a support shell (8) by connectors (11) which is connected by twisted pairs (10) to a printed circuit board (7) supported on mechanical supports (9).

Electric components (5) for connecting the SQUIDS to room temperature electronics (14) are mounted on printed circuit boards (4). A neck plug (3) contains radiation shields and cabling with a top plate (2) into which is inserted a connector (13) for the connection to the room temperature electronics.

ADVANTAGE/USE - Solid neck of light construction which gives good thermal insulation but is simple and small. Excess noise caused by resistance leads is compensated by increasing SQUID gain using positive feedback.

Dwg.1/4

Title Terms: MULTICHANNEL; DEVICE; MEASURE; WEAK; TEMPORARY; VARY; MAGNETIC ; FIELD; SQUID; MAGNETOMETER; MOUNT; HELIUM; FILLED; SUPPORT; SHELL; SUPPORT; CONNECT; ROOM; TEMPERATURE; ELECTRONIC

Derwent Class: P31; S01; S05; U14
International Patent Class (Main): G01R-033/035
International Patent Class (Additional): A61B-005/04; A61B-005/05
File Segment: EPI; EngPI

13/5/5 (Item 5 from file: 347)
DIALOG(R)File 347:JAPIO

07208021 **Image available**
WEAK MAGNETIC FIELD MEASURING DEWAR

PUB. NO.: 2002-076453 [JP 2002076453 A]
PUBLISHED: March 15, 2002 (20020315)
INVENTOR(s): SAHO NORIHIDE
TANAKA HIROYUKI
SASABUCHI HITOSHI
APPLICANT(s): HITACHI LTD
APPL. NO.: 2000-264379 [JP 2000264379]
FILED: August 31, 2000 (20000831)
INTL CLASS: H01L-039/04; A61B-005/05; G01R-033/035

ABSTRACT
PROBLEM TO BE SOLVED: To provide a cryogenic **heat** insulating container with a small amount of **heat** intrusion of liquid helium by cooling a **heat** shield body with a **temperature** that is low enough and reducing the amount of **heat** intrusion due to thermal radiation.

SOLUTION: Radiation shields, in which small strip drum members having narrow width in the cyogenic direction are formed on both sides of an insulating substrate, are cooled in a freezer, and the radiation shields are combined with the outer parts of radiation shield holders that are fixed to the flanges to be cooled in the freezer. The weak **magnetic** field measuring Dewar that reduces the evaporation amount of a refrigerant is provided by reducing the thermal **resistance** of the **heat** shield plate and the width of the small strip drum member near the **sensor** and placing the **heat** shield plate with little **magnetic** noise and enough cooling capacity.

13/5/6 (Item 6 from file: 347)
DIALOG(R)File 347:JAPIO

05171126 **Image available**
MAGNETIC RESONANCE IMAGING APPARATUS

PUB. NO.: 08-126626 [JP 8126626 A]
PUBLISHED: May 21, 1996 (19960521)
INVENTOR(s): YOSHINO HITOSHI
APPLICANT(s): HITACHI MEDICAL CORP [420143] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 06-267456 [JP 94267456]
FILED: October 31, 1994 (19941031)
INTL CLASS: [6] A61B-005/055; G01R-033/385
JAPIO CLASS: 28.2 (SANITATION -- Medical); 46.1 (INSTRUMENTATION -- Measurement)

JAPIO KEYWORD:R005 (PIEZOELECTRIC FERROELECTRIC SUBSTANCES)

ABSTRACT

PURPOSE: To prevent vibration and noise by correcting applied voltage on the basis of the temperature of an inclined magnetic field coil when electromagnetic force is cancelled by generating the force whose phase is reverse to that of the vibration/deformation generated in the inclined magnetic field coil, by controlling the voltage applied to the energy conversion element provided to the inclined magnetic field coil.

CONSTITUTION: A pair of piezoelectric elements 30a, 30b generating force in a cylindrical direction and a pair of piezoelectric elements 30c, 30d generating force in an axial direction are arranged inside and outside a cylindrical inclined **magnetic** field coil consisting of an inclined **magnetic** field coil conductor 40 and a bobbin 41. The **voltage** applied to the piezoelectric element 30 (30a-30d) is controlled by a control means controlling the examination conditions of an MRI apparatus. At this time, the **temperature** dependence correction quantity of the piezoelectric element 30 is calculated on the basis of the **temperature** data from a **temperature** **sensor** 60 and the **voltage** applied to the piezoelectric element 30 is corrected corresponding to **temperature** By this constitution, the lowering of the output of the piezoelectric element 30 caused by the **heat** generated in the inclined **magnetic** field coil is prevented and noise and vibration can be cancelled stably.

13/5/7 (Item 7 from file: 347)
DIALOG(R)File 347:JAPIO

02653132 **Image available**
ULTRASONIC ENDOSCOPE

PUB. NO.: 63-270032 [JP 63270032 A]
PUBLISHED: November 08, 1988 (19881108)
INVENTOR(s): IMAIDE SHINICHI
SHIONOYA KAZUNORI
IKUTA HIDETSUGU
TAGUCHI KOJI
NISHIYAMA TOYOO
WAKAMATSU SEIICHI
NAGASAKI TATSUO
APPLICANT(s): OLYMPUS OPTICAL CO LTD [000037] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 62-106746 [JP 87106746]
FILED: April 30, 1987 (19870430)
INTL CLASS: [4] A61B-008/12
JAPIO CLASS: 28.2 (SANITATION -- Medical)
JAPIO KEYWORD:R007 (ULTRASONIC WAVES)
JOURNAL: Section: C, Section No. 572, Vol. 13, No. 84, Pg. 10, February 27, 1989 (19890227)

ABSTRACT

PURPOSE: To always faithfully transform an object to be diagnosed into an image, by arranging a magnetic recording part so as to integrally rotate the same along with an ultrasonic vibrator and detecting the angle of rotation of the ultrasonic vibrator on the basis of the output of a magnetic sensor.

CONSTITUTION: N-poles 28a and S-poles 28b are formed to the rotary shaft 22a, integrally rotating along with an ultrasonic vibrator 21 in the

peripheral direction by alternate **magnetization** to constitute a **magnetic** recording part 26 and a **magnetic sensor** 27 is arranged in the vicinity of said **magnetic** recording part 26. The **magnetic sensor** 27 is provided on a substrate 29 so that MR elements 30a, 30b are shifted by 1/4 with respect to a **magnetizing** pitch and an MR element 30C is provided. When the ultrasonic vibrator 21 is rotated through a flexible shaft 25, the MR elements 30a, 30b output the voltages corresponding to the change in the **magnetic** field of a **magnetizing** pattern and the **resistance** change due to the change in the circumferential **temperature** can be detected from the MR element 30c. As mentioned above, since the **magnetic sensor** 27 can directly detect the angle of rotation of the ultrasonic vibrator 21, the shape of an object to be extracted can be faithfully transformed into an image.

13/5/8 (Item 8 from file: 347)
DIALOG(R)File 347:JAPIO

02627702 **Image available**
POWER SUPPLY FOR NORMAL CONDUCTING MAGNET

PUB. NO.: 63-244602 [JP 63244602 A]
PUBLISHED: October 12, 1988 (19881012)
INVENTOR(s): BABA SETSU
MIURA NOBUYUKI
INOUE YUJI
APPLICANT(s): YOKOGAWA MEDICAL SYST LTD [485515] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 62-077272 [JP 8777272]
FILED: March 30, 1987 (19870330)
INTL CLASS: [4] H01F-007/22; A61B-010/00; G01R-033/22; G05F-007/00
JAPIO CLASS: 42.1 (ELECTRONICS -- Electronic Components); 28.2 (SANITATION -- Medical); 43.3 (ELECTRIC POWER -- Transmission & Distribution); 46.1 (INSTRUMENTATION -- Measurement)
JAPIO KEYWORD: R006 (SUPERCONDUCTIVITY)
JOURNAL: Section: E, Section No. 712, Vol. 13, No. 51, Pg. 59, February 06, 1989 (19890206)

ABSTRACT

PURPOSE: To compensate a drift of a magnetic field due to a temperature change of a magnetic shield by a method wherein a current quantity is adjusted by a voltage difference between a reference voltage and an output by a current detection means.

CONSTITUTION: The following are installed: an addition means 10 to add a compensating **voltage** of a **temperature** compensating and adjusting means 8 and an output **voltage** of a reference **voltage** power supply 9: a control means 11 to control a current adjusting means on the basis of a difference between an output by the addition means and another output by a current detection means 5. That is to say, a **temperature** of a **magnetic** shield 2 is detected by using a **temperature sensor** 7; it is input to the adder 10 as a compensating **voltage** Vth at the **temperature** compensating and adjusting means 8; the **voltage** is added to an output **voltage** Vr of the compensating **voltage** power supply 9; a **voltage** I.r at both ends of a current detection resistor 5 which is caused by a current I flowing through a coil 1 is input to a controller 11 via an amplifier 6; an output **voltage** of the adder 10 outputs a control signal which is based on a **voltage** '(Vr+Vth)-I.r' as a difference between the **voltage** and 'Vr+Vth'. By this setup, even when the **temperature** of the **magnetic**

shield fluctuates, it is possible to obtain a stable **magnetic** shield for a nuclear **magnetic** resonance tomography system using a normal conducting magnet where the strength of a **magnetic** field of an electromagnet is not changed.

```
Set      Items   Description
S1      714537   SENSOR? ?
S2     2536968   TEMPERATURE? ? OR HEAT OR COLD OR COLDNESS OR THERMOMET? OR
               THERMO()(METRE? ? OR METER? ?)
S3      908337   MAGNETI? OR MAGNETO? OR ELECTROMAGNETI? OR ELECTROMAGNETO?
S4         192   WIEGAND
S5     1071412   RESISTANCE OR OHM? ?
S6      876447   VOLTAGE OR VOLT? ?
S7          91   S1(S)S2(S)S3(S)S5(S)S6
S8           0   S7 AND IC=A61B
S9        4385   S1(S)S2(S)S3
S10        124   S9 AND IC=A61B
S11          9   S10(S)(S5 OR S6 OR S4)
S12          9   IDPAT (sorted in duplicate/non-duplicate order)
S13          8   IDPAT (primary/non-duplicate records only)
? show files
File 347:JAPIO Oct 1976-2002/Sep(Updated 030102)
         (c) 2003 JPO & JAPIO
File 350:Derwent WPIX 1963-2002/UD,UM &UP=200303
         (c) 2003  Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
         (c) 2002 INPI.  All rts. reserv.
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FT Patents

10/5,K/1 (Item 1 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01516331
Medical device with a position sensor
Medizinische Vorrichtung mit einem Positionssensor
Dispositif medical avec un capteur de position
PATENT ASSIGNEE:
Biosense, Inc., (1910475), One Johnson & Johnson Plaza, New Brunswick, New Jersey 08933-7003, (US), (Applicant designated States: all)
INVENTOR:
Govari, Assaf, Vitzo 1, Haifa 34400, (IL)
LEGAL REPRESENTATIVE:
Mercer, Christopher Paul et al (46611), Carpmaels & Ransford 43, Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1266614 A1 021218 (Basic)
APPLICATION (CC, No, Date): EP 2002254182 020614;
PRIORITY (CC, No, Date): US 882127 010615
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI; LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **A61B-005/06** ; G01B-007/004; G01V-003/08

ABSTRACT EP 1266614 A1
A medical device and position sensor combination for use in medical applications comprises a position sensor having a core made of a high permeable material . The core material is made of a Wiegand effect material comprising a mixture of cobalt, vanadium, and iron. The position sensor has an outer diameter of approximately 0.4mm and is used in a medical device having an outer diameter of approximately 0.67mm.
ABSTRACT WORD COUNT: 69
NOTE:
Figure number on first page: 1B

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021218 A1 Published application with search report
LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION Helmholtz coils having three, mutually orthogonal axes. The Helmholtz chamber has the property that the **magnetic** field within the chamber is relatively invariant with distance from the center of the chamber. Nevertheless, in testing the position **sensors** 10, efforts were made to locate the **sensors** 10 in the same spot within the chamber. The Helmholtz coils were energized with alternating current (AC) having a frequency of 3 KHz. **Sensor** voltages were measured from one **sensor** coil 10 in each position **sensor** in five degree increments over the **temperature** range of 30(degree) to 80(degree)C. Measurements were performed on the twenty position **sensors** 10 wherein the **sensor** coil cores 12 were all made of **Wiegand** effect material for determining parameters such as **resistance** drift Gr)), **temperature** sensitivity drift Gs)), **resistance** drift versus **temperature** slope a0)) and sensitivity drift versus **temperature** slope b0)) used to establish a sensitivity correction S(T), e.g. as part of...portion, for instance, the EPROM.

When in use, the medical device 80 having the position **sensor** 10 is placed within a patient and within an externally applied generated AC **magnetic** field from a plurality of **magnetic** field generators (not shown)

positioned external to the patient. When using the medical device 80...

...in a procedure such as an ablation procedure, current (I) is delivered through the position **sensor** 10 as a consistent and uniform signal, for instance, a 4 KHz signal delivered by the location system 30. The **voltage** value is determined at the **sensor** 10 and the **voltage** value is converted to the **resistance** value R(T) by signal processor 48 according to the formula R(T)=V/I. In turn, the real time **temperature** (T) at the position **sensor** 10 is determined according to the formula: where R(T) is the **resistance** determined at the current or real time **temperature** at the position **sensor** 10, R0)) is the initial **resistance** determined during the calibration procedure and recalled from the signal processor memory and b0)) is the **resistance** drift factor also recalled from memory.

The next step after calculating the real time temperature...

...for the position and orientation algorithm according to the formula: where B is the calculated **magnetic** field at the measured at the position **sensor** 10, V is the **voltage** at the position **sensor** 10 and S(T) is the real time sensitivity of the position **sensor** 10 at the real time **temperature** . In turn, the new **magnetic** field measurement B is used in the position and orientation algorithm to calculate the location, e.g. the position and orientation, of the position **sensor** 10.

Accordingly, at any given moment during use of the medical device 80 and the...was connected to RF generator 50.

The apparatus of Fig. 4 was contained within a **magnetic** field generated by three **magnetic** field generator elements, e.g. electromagnets (not shown) arranged in a triangular arrangement roughly 40...

...70 W. Several types of catheters were evaluated. The catheter types included catheters having location **sensors** having **sensor** coil cores comprising ferrite; catheters having location **sensors** with **sensor** coil cores comprising carbonyl iron and in accordance with the present invention, catheters 80 having **sensor** coils 10 with cores 12 made of **Wiegand** effect material. The **temperature** sensitivity correction algorithm was employed by the signal processor 48 when testing the catheters 80 having the **sensor** coils 10 with Weigand effect material cores 12 of the present invention.

Since the catheter...is being used at the desired site within the patient and within the externally applied **magnetic** field, a **voltage** measurement is made by the signal processor 48 in order to measure the **voltage** across the **sensor** coil 10. In accordance with the algorithm described above, both the **temperature** measurement signal (I) and the measured **voltage** value are used by the signal processor 48 to determine a **resistance** value at the **sensor** coil 10. And, in accordance with this algorithm, an actual **temperature** value is determined in real time based on the actual **temperature** measured with the **sensor** coil 10.

Thus, with the actual temperature value, the operator or physician utilizing the system...

10/5,K/2 (Item 2 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01516330
Method and system for measuring temperature and of adjusting for temperature sensitivity with a medical device having a position sensor
PATENT ASSIGNEE:

Biosense, Inc., (1910475), One Johnson & Johnson Plaza, New Brunswick,
New Jersey 08933-7003, (US), (Applicant designated States: all)
INVENTOR:
Govari, Assaf, Vitzo 1, Haifa 34400, (IL)
LEGAL REPRESENTATIVE:
Mercer, Christopher Paul et al (46611), Carpmaels & Ransford 43,
Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1266610 A2 021218 (Basic)
APPLICATION (CC, No, Date): EP 2002254181 020614;
PRIORITY (CC, No, Date): US 882126 010615
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;
LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **A61B-005/00** ; G01K-013/00

ABSTRACT EP 1266610 A2
A method for measuring temperature and of adjusting for temperature sensitivity of a medical device having a position sensor comprises the steps of providing a medical device having a position sensor and measuring voltage at the position sensor. A resistance value is then determined from the measured voltage and a temperature value at the position sensor is determined based on the resistance value. The temperature value is determined using the position sensor. Accordingly, temperature is directly measured and monitored using the position sensor itself. Additionally, a sensitivity is determined at the position sensor based on the temperature. Location information from the position sensor is adjusted based on the sensitivity.
ABSTRACT WORD COUNT: 110
NOTE:
Figure number on first page: NONE

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021218 A2 Published application without search report
LANGUAGE (Publication,Procedural,Application): English; English; English

10/5,K/3 (Item 3 from file: 348)
DIALOG(R)File 348:EUROPEAN PATENTS

01516327
Position sensor having core with high permeability material
Positionssensor mit einem Kern, der aus Material mit hoher Permeabilitat besteht
Capteur de position avec noyau ayant une haute permeabilite
PATENT ASSIGNEE:
Biosense, Inc., (1910475), One Johnson & Johnson Plaza, New Brunswick,
New Jersey 08933-7003, (US), (Applicant designated States: all)
INVENTOR:
Govari, Assaf, Vitzo 1, Haifa 34400, (IL)
LEGAL REPRESENTATIVE:
Mercer, Christopher Paul et al (46611), Carpmaels & Ransford 43,
Bloomsbury Square, London WC1A 2RA, (GB)
PATENT (CC, No, Kind, Date): EP 1266613 A1 021218 (Basic)
APPLICATION (CC, No, Date): EP 2002254174 020614;
PRIORITY (CC, No, Date): US 882125 010615
DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;

LU; MC; NL; PT; SE; TR
EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI
INTERNATIONAL PATENT CLASS: **A61B-005/06** ; G01P-003/481; G01D-005/14
ABSTRACT EP 1266613 A1

A position sensor for a medical device comprises a core made of a high permeable material such as Wiegand effect material comprising a mixture of cobalt, vanadium, and iron. The position sensor has an outer diameter of approximately 0.4 mm and is used in a medical device having an outer diameter of approximately 0.67 mm.

ABSTRACT WORD COUNT: 56
NOTE:
Figure number on first page: NONE

LEGAL STATUS (Type, Pub Date, Kind, Text):
Application: 021218 A1 Published application with search report
LANGUAGE (Publication,Procedural,Application): English; English; English

...SPECIFICATION Helmholtz coils having three, mutually orthogonal axes. The Helmholtz chamber has the property that the **magnetic** field within the chamber is relatively invariant with distance from the center of the chamber. Nevertheless, in testing the position **sensors** 10, efforts were made to locate the **sensors** 10 in the same spot within the chamber. The Helmholtz coils were energized with alternating current (AC) having a frequency of 3 KHz. **Sensor** voltages were measured from one **sensor** coil 10 in each position **sensor** in five degree increments over the **temperature** range of 30(degree) to 80(degree)C. Measurements were performed on the twenty position **sensors** 10 wherein the **sensor** coil cores 12 were all made of **Wiegand** effect material for determining parameters such as **resistance** drift Gr)), **temperature** sensitivity drift Gs)), **resistance** drift versus **temperature** slope a0)) and sensitivity drift versus **temperature** slope b0)) used to establish a sensitivity correction S(T), e.g. as part of...portion, for instance, the EPROM.

When in use, the medical device 80 having the position **sensor** 10 is placed within a patient and within an externally applied generated AC **magnetic** field from a plurality of **magnetic** field generators (not shown) positioned external to the patient. When using the medical device 80...

...in a procedure such as an ablation procedure, current (I) is delivered through the position **sensor** 10 as a consistent and uniform signal, for instance, a 4 KHz signal delivered by the location system 30. The **voltage** value is determined at the **sensor** 10 and the **voltage** value is converted to the **resistance** value R(T) by signal processor 48 according to the formula R(T)=V/I. In turn, the real time **temperature** (T) at the position **sensor** 10 is determined according to the formula: where R(T) is the **resistance** determined at the current or real time **temperature** at the position **sensor** 10, R0)) is the initial **resistance** determined during the calibration procedure and recalled from the signal processor memory and b0)) is the **resistance** drift factor also recalled from memory.

The next step after calculating the real time temperature...

...for the position and orientation algorithm according to the formula: where B is the calculated **magnetic** field at the measured at the position **sensor** 10, V is the **voltage** at the position **sensor** 10 and S(T) is the real time sensitivity of the position **sensor** 10 at the real time **temperature** . In turn, the new **magnetic** field measurement B is used in the position and orientation algorithm to calculate the location, e.g. the position and orientation, of the position **sensor** 10.

Accordingly, at any given moment during use of the medical device 80 and the...was connected to RF generator 50.

The apparatus of Fig. 4 was contained within a **magnetic** field generated by three **magnetic** field generator elements, e.g. electromagnets (not shown) arranged in a triangular arrangement roughly 40...

...70 W. Several types of catheters were evaluated. The catheter types included catheters having location **sensors** having **sensor** coil cores comprising ferrite; catheters having location **sensors** with **sensor** coil cores comprising carbonyl iron and in accordance with the present invention, catheters 80 having **sensor** coils 10 with cores 12 made of **Wiegand** effect material. The **temperature** sensitivity correction algorithm was employed by the signal processor 48 when testing the catheters 80 having the **sensor** coils 10 with Weigand effect material cores 12 of the present invention.

Since the catheter...is being used at the desired site within the patient and within the externally applied **magnetic** field, a **voltage** measurement is made by the signal processor 48 in order to measure the **voltage** across the **sensor** coil 10. In accordance with the algorithm described above, both the **temperature** measurement signal (I) and the measured **voltage** value are used by the signal processor 48 to determine a **resistance** value at the **sensor** coil 10. And, in accordance with this algorithm, an actual **temperature** value is determined in real time based on the actual **temperature** measured with the **sensor** coil 10.

Thus, with the actual temperature value, the operator or physician utilizing the system...

10/5,K/8 (Item 8 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00960447 **Image available**
COOLING SYSTEM FOR A PHOTOCOSMETIC DEVICE
SYSTEME DE REFROIDISSEMENT DESTINE A UN DISPOSITIF PHOTOCOSMETIQUE
Patent Applicant/Assignee:
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Patent Applicant/Inventor:
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  EFROFEEV Andrei V, 38 Royal Crest Drive #7, N. Andover, MA 01845, US, US (Residence), RU (Nationality), (Designated only for: US)
Legal Representative:
  POWERS Jeffrey B (agent), Wolf, Greenfield & Sacks, P.C., 600 Atlantic Avenue, Boston, MA 02210, US,
Patent and Priority Information (Country, Number, Date):
  Patent: WO 200294116 A1 20021128 (WO 0294116)
  Application: WO 2002US16435 20020523 (PCT/WO US0216435)
  Priority Application: US 2001292827 20010523; US 200252474 20020118; US 2002363798 20020312; US 2002363871 20020312

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: **A61B-018/18**
Publication Language: English
Filing Language: English

English Abstract
Photocosmetic device (100) for use in medical or non-medical environments (e.g., a home, barbershop, or spa), which can be used for a variety of tissue treatments. Radiation is delivered to the tissues via optical systems (520 for example) designed to pattern the radiation and project the radiation to a particular depth. The device has a variety of cooling systems including phase change cooling solids and liquids to cool treated skin and the radiation sources (510 for example). Contact sensors (1712) and motion sensor (1820) may be used to enhance treatment. The device may be modular to facilitate manufacture and replacement of parts.

Legal Status (Type, Date, Text)
Publication 20021128 A1 With international search report.
Publication 20021128 A1 Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.
Correction 20030103 Corrected version of Pamphlet: pages 1/33-33/33, drawings, replaced by new pages 1/33-33/33; due to late transmittal by the receiving Office
Republication 20030103 A1 With international search report.

Detailed Description
... of speed measurement are with the scope of this aspect of the invention. For example, **electromagnetic** apparatuses that measure handpiece speed by recording the time dependence of electrical (capacitance and **resistance**)/ **magnetic** properties of the skin as the handpiece is moved relative the skin. Alternatively, the fi...

...speed because the acoustic spectrum is dependent on speed. Another alternative is to use thermal **sensors** to measure handpiece speed, by using two **sensors** separated by a distance along the direction in which the handpiece is moved along the first **sensor** monitors the **temperature** of untreated skin, which is independent of handpiece speed, and a second **sensor** monitors the post-irradiation skin **temperature** ; the slower the handpiece speed, the higher the fluence delivered to a given area of the skin, which results in a higher skin **temperature** measured by the second detector. Therefore, the speed can be calculated based on the **temperature** difference between the two **sensors** .

- 33 An alternative system to measure handpiece speed using thermal characteristics uses a heat source...

10/5,K/9 (Item 9 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00936121 **Image available**
INTRAVASCULAR TEMPERATURE SENSOR
CAPTEUR DE TEMPERATURE INTRAVASCULAIRE

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Legal Representative:
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Patent and Priority Information (Country, Number, Date):
Patent: WO 200269795 A1 20020912 (WO 0269795)
Application: WO 2002US3712 20020207 (PCT/WO US0203712)
Priority Application: US 2001782502 20010213

Designated States: AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SI SK SL TJ TM TN TR TT TZ UA UG UZ VN YU ZA ZM ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW
(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class: **A61B-005/00**
Publication Language: English
Filing Language: English

English Abstract
Devices and methods for detecting vulnerable plaque within a blood vessel are disclosed. A catheter in accordance with the present invention includes an elongate shaft having a proximal end, a distal end, and an outer surface. At least one temperature sensor is disposed proximate to the distal end of the elongate shaft. In one preferred embodiment, the at least one temperature sensor is adpated to contact inner surface of the blood vessel. In another preferred embodiment, at least one temperatre sensor is disposed within a channel defined by a body member that is disposed about the elongate shaft.

Legal Status (Type, Date, Text)
Publication 20020912 A1 With international search report.
Examination 20021128 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description
... 24 of blood vessel 20 when anns 108 are in the extended position.

Each **sensor** 120 may comprise a **temperature** **sensor** , an ultrasonic

sensor , and/or an **electromagnetic** radiation **sensor** . In a preferred embodiment, each **sensor** 120 comprises a **temperature** **sensor** . Examples of **temperature** **sensors** which may be suitable in some applications include **resistance** **temperature** devices (RTD's), thennistors, thermocouples, MEMS (microelectircal mechanical systems).

Blood vessel 20 includes a...inner surface of a blood vessel when arms 308 are in the extended position. Each **sensor** 320 may comprise various **sensor** types without deviating from the spirit and scope of the present invention. Examples of **sensors** which may be suitable in some applications include pressure **sensors** , ultrasonic **sensors** , **electromagnetic** radiation **sensors** , and **temperature** **sensors** . In a preferred embodiment, each **sensor** 320 comprises a **temperature** **sensor** . **Temperature** **sensors** which may be suitable in some applications, include **resistance** **temperature** devices (RTD's), thermistors, thermocouples, and MEMS.

Figure 5 is a perspective view of...

10/5,K/24 (Item 24 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00751972 **Image available**
LINEARIZED ULTRASOUND BEAM ALIGNMENT SERVO
FAISCEAU ULTRASONORE LINEARISE A ALIGNEMENT ASSERVI
Patent Applicant/Assignee:
P D CO-OP INC, 36 Briarwood Lane, Gorham, ME 04038, US, US (Residence), US (Nationality)
Inventor(s):
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BERGSTROM Gary B, 191 Miles Road, Moreland Hills, OH 44022, US
Legal Representative:
CASEIRO Chris A, Pierce Atwood, One Monument Square, Portland, ME 04101, US
Patent and Priority Information (Country, Number, Date):
Patent: WO 200065338 A1 20001102 (WO 0065338)
Application: WO 2000US9388 20000407 (PCT/WO US0009388)
Priority Application: US 99299287 19990426
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM HR HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW
(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE
(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
(AP) GH GM KE LS MW SD SL SZ TZ UG ZW
(EA) AM AZ BY KG KZ MD RU TJ TM
Main International Patent Class: G01N-029/26
International Patent Class: H02K-007/09; **A61B-008/12**
Publication Language: English

English Abstract
A levitated rotor (340), neutrally buoyed in ultrasound transmission fluid, moves to position and aim an ultrasound transducer in up to five servo-controlled coordinates of position and tilt rotation. Stator drives/sense windings drive the rotor (340) via a rotor magnet and sense coordinates via inductive interactions with a rotor coil. For five-axis control, one set of stator windings controls two-axis lateral translation

while a second set controls axial translation plus two-axis tilt rotation. The windings produce a comparatively linear relationship between the five rotor geometric coordinates and the electromagnetic couplings that drive and sense these coordinates. To produce this linearity seamlessly over a wide coordinate range coming close to the windings, each set of windings is divided into overlapping subsets. A two-way drive/sense matrix mapping translates between up to five control coordinates and more than five winding circuits.

Legal Status (Type, Date, Text)
Publication 20001102 A1 With international search report.
Examination 20010426 Request for preliminary examination prior to end of 19th month from priority date

Detailed Description
... of their detection process. For reasonable current density and tolerable local heating in a Hall **sensor** bridge, the bridge output **voltage** is measured in microvolts for field strengths on the order of one Tesla. Thermal agitation establishes a noise floor for the bridge output **voltage** , regardless of the performance of the amplifier that brings the bridge output up to a...

..level. Given the maximum strength of available permanent magnet materials, coupled with the inevitably large **magnetic** field attenuation factors described above, one finds that a small set of Hall **sensors** (e.g., the set of eight **sensors** taught in the prior art patent) cannot accurately resolve the position of a neutrally buoyant...

...to jitter and drift in position and orientation due to disturbances that trace back to **temperature** gradients across the Hall bridges, to amplifier noise and drift, and to Johnson noise in the Hall **sensor** bridges. As the rotor moves away from a central position, causing some Hall **sensors** to operate in a less sensitive range, servo performance deteriorates further.

Low-level position/orientation...

10/5,K/27 (Item 27 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00568722 **Image available**
INTERNAL THERMOMETER
THERMOMETRE INTERNE
Patent Applicant/Assignee:
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TAKEDA Nabuo,
AHN Suzanne I,
AHN Samuel S,
HAYS Steven R,
GAFFNEY F Andrew,
Inventor(s):
ISHIKAWA Akira,
TAKEDA Nabuo,
AHN Suzanne I,
AHN Samuel S,

HAYS Steven R,
GAFFNEY F Andrew,
Patent and Priority Information (Country, Number, Date):
Patent: WO 200032095 A1 20000608 (WO 0032095)
Application: WO 99US28097 19991124 (PCT/WO US9928097)
Priority Application: US 98110041 19981125
Designated States: AE AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW GH GM KE LS MW SD SL SZ TZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG
Main International Patent Class: **A61B-005/00**
Publication Language: English

English Abstract
A **temperature sensor** (25) is fabricated in a spherical integrated transponder circuit (15) which may be placed in the human body. An external monitoring station (13) generates an energy field using a **magnetic** field generator (19) which is coupled to a power coil (21) of the transponder (15). The power coil (21) passes power to a power regulator (23). **Temperature** data obtained by the **temperature sensor** (25) is passed to a **voltage** controlled oscillator (27) for conversion into an RF signal. A mixing circuit (31) receives the RF **temperature** signal and modulates the **temperature** data signal onto an oscillator frequency from an RF oscillator (29). An RF amplifier (33) transmits the modulated RF signal via an antenna (35). The signal is received by an RF receiver (37), processed using a CPU (39) and displayed on a display (41). The transponder (15) may be powered either by the external **electromagnetic** radiation source (19) or an internal battery.

Detailed Description
... temperature sensed by the temperature sensor.

Power generating circuitry residing on the substrate powers the **temperature sensor** and the signal generating circuitry in response to the external **electromagnetic** signal. The **temperature sensor** 5 produces a **voltage** that corresponds to **temperature** . The **temperature sensor** can include a thennistor. The **temperature sensor** is coupled to a **voltage** controlled oscillator. The **voltage** controlled oscillator produces a signal, the frequency of which is related to the **temperature** sensed by the **sensor** . The signal produced by the **voltage** controlled oscillator modulates an RF signal generated by RF oscillator circuitry residing on the substrate...

10/5,K/40 (Item 40 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00319077 **Image available**
DATA INPUT ARRANGEMENT
DISPOSITIF DE SAISIE DE DONNEES
Patent Applicant/Assignee:
POLAR ELECTRO OY,
TAMMI Tapio,
Inventor(s):
TAMMI Tapio,

Patent and Priority Information (Country, Number, Date):
  Patent: WO 9601585 A1 19960125
  Application: WO 95FI397 19950710 (PCT/WO FI9500397)
  Priority Application: FI 943283 19940711
Designated States: US AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
Main International Patent Class: **A61B-005/00**
International Patent Class: G06F-19:00; G06F
Publication Language: English
Fulltext Availability:
  Detailed Description
  Claims
Fulltext Word Count: 3910
English Abstract

According to the present invention, a standard, manual data input arrangement of a data processing device is characterized in that it includes means (13, 14, 15) for measuring one or more psychophysical and/or biological quantities and means for transferring information obtained as a response to said measurement performed by said means for measuring to said data processing device. In one advantageous embodiment, sensors (13, 14, 15) measure the heart rate, body temperature and skin conductivity from the surface of the skin. Said measurement information is used to determine a person's state of stress based on known methods of analysis, which state is output on a computer display. Said measurement can be made while working, by touching sensors situated close to each other (13, 14, 15) in a mouse, for example. The present invention can be used to implement an easy-to-use measuring device that determines stress while a person is working..

Detailed Description
... continuously or at least intermittently measured are the heart rate and it's changes, body **temperature** and blood pressure, and possibly also fluid balance, skin conductivity, blood glucose and blood oxygen...

...rule, these devices measure quantities that reflect the psychophysical condition through different types of skin **sensors** . The measurement can be galvanic, in which case the **sensor** measures the **resistance** , capacitance or potential difference between two or more electrodes which are touching the surface of...

...occuring in the conductivity of electrical components which touch the surface of the skin. With **sensors** based on **electromagnetism** , the measurable quantity is determined by an **electromagnetic** signal which is reflected from or generated by the object being measured and which is usually optical. Optical **sensors** usually operate in the range of visible light or infrared light. Acoustic **sensors** also measure a signal which is reflected or generated by the object being measured and which is a pressure signal. The measuring frequencies of acoustic **sensors** typically vary from the hearing range to the ultrasonic range. Other **sensors** that measure body fimetions are based on the measurement of pressure, force and their changes...

10/5,K/43 (Item 43 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT

00132288
NON-INVASIVE DETERMINATION OF MECHANICAL CHARACTERISTICS IN THE BODY

DETERMINATION NON-INVASIVE DE CARACTERISTIQUES MECANIQUES A L'INTERIEUR DU CORPS

Patent Applicant/Assignee:
SEALE Joseph B,
Inventor(s):
SEALE Joseph B,
Patent and Priority Information (Country, Number, Date):
Patent: WO 8604801 A1 19860828
Application: WO 86US351 19860219 (PCT/WO US8600351)
Priority Application: US 85833 19850219
Designated States: AT AU BE BR CH DE DK FR GB IT JP KR LU NL NO SE SU US
Main International Patent Class: **A61B-005/02**
Publication Language: English
Fulltext Availability:
Detailed Description
Claims
Fulltext Word Count: 23805

English Abstract

A non-invasive system and method for inducing vibrations in a selected element of the human body and detecting the nature of responses for determining mechanical characteristics of the element. The method includes the steps of: inducing multiple-frequency vibrations, including below 20 KHz, in a selected element e.g., in one embodiment, the carotid artery (40, Fig. 1), of the body by use of a driver (1); determining parameters of the vibrations exerted on the body by the driver; sensing variations of a dimension of the element of the body over time, including in response to the driver; correlating the variations with frequency components of operation of the driver below 20 KHz to determine corresponding frequency components of the variations; resolving the frequency components into components of vibrations mode shape; and determining the mechanical characteristics of the element on the basis of the parameters of vibrations exerted by the driver and of the components of vibration mode shape.

Detailed Description

... so that these artifacts are minimized in the feedback signal developed on wire 678.

The **voltage** on wire 678, representing vibrational position change, is coupled to the input of filter 685...

...the restoring characteristics of the support o@rings in the drivers, There is also a **temperature** correction factor, based on the **temperature** @ sensitivities of the permanent magnets in the six driver elements, **Temperature** of the reference element is relatively unimportant. A **temperature** **sensor** on plate 608 provides a signal that is digitized and fed into the computer. The...the whole organ embodiment, as 1-5 described with reference to Fig* 14a A single **magnetic** driver, 800 in Fig.

14, replaces the function of the six parallel-wired drivers 601...

10/TI/2 (Item 2 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Method and system for measuring temperature and of adjusting for temperature sensitivity with a medical device having a position sensor

the Patent

Verfahren und System zur Temperaturmessung und zur Temperaturempfindlichkeitseichung bei einer medizinischen Vorrichtung mit Positionssensor
Procede et systeme de mesure de temperature et d'ajustement de la sensibilite a la temperature dans un dispositif medical ayant un senseur de position

10/TI/3 (Item 3 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Position sensor having core with high permeability material
Positionssensor mit einem Kern, der aus Material mit hoher Permeabilitat besteht
Capteur de position avec noyau ayant une haute permeabilite

10/TI/4 (Item 4 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Magnetometer
Magnetometer
Magnetometre

10/TI/5 (Item 5 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

Biomagnetometer with whole head coverage of a seated or reclined subject
Biomagnetometer mit Erfassung des ganzen Kopfes einer sitzenden oder liegenden Person
Biomagnetometre pour acquisition de la tete totale d'une personne en position assise ou couchee

10/TI/6 (Item 6 from file: 348)
DIALOG(R)File 348:(c) 2003 European Patent Office. All rts. reserv.

MODULAR LUMINESCENCE-BASED MEASURING SYSTEM USING FAST DIGITAL SIGNAL PROCESSING
MODULAR-AUFGEBAUTES LUMINISZENZ-MESSSYSTEM MIT SCHNELLER DIGITALER SIGNAL-VERARBEITUNG
SYSTEME DE MESURE MODULAIRE BASE SUR LA LUMINESCENCE, AVEC TRAITEMENT RAPIDE DES SIGNAUX NUMERIQUES

10/TI/7 (Item 7 from file: 349)
DIALOG(R)File 349:(c) 2003 WIPO/Univentio. All rts. reserv.

METHOD AND SYSTEM FOR ORGAN POSITIONING AND STABLIZATION
METHODE ET SYSTEME DE POSITIONNEMENT ET DE STABILISATION D'ORGANES

10/TI/10 (Item 10 from file: 349)

COMPREHENSIVE PAIN ASSESSMENT SYSTEMS AND METHODS
SYSTEMES ET PROCEDES D'EVALUATION DE DOULEUR GENERALE

10/TI/11 (Item 11 from file: 349)

CLOSED LOOP GLYCEMIC INDEX SYSTEM
SYSTEME D'INDICATEUR DE GLYCEMIE EN BOUCLE FERMEE

10/TI/12 (Item 12 from file: 349)

PRESSURE GRADIENT MEASUREMENT FOR DETECTION OF SHUNT STENOSIS
MESURE DU GRADIENT DE PRESSION POUR DETECTION DE STENOSE DE SHUNT

10/TI/13 (Item 13 from file: 349)

TEMPERATURE SENSING CATHETER
CATHETER DE DETECTION DE TEMPERATURE

10/TI/14 (Item 14 from file: 349)

SUCTION STABILIZED EPICARDIAL ABLATION DEVICES
DISPOSITIFS D'ABLATION EPICARDIQUE STABILISEE PAR ASPIRATION

10/TI/15 (Item 15 from file: 349)

SYSTEM AND METHOD FOR ASSESSING TRANSMURALITY OF ABLATION LESIONS
SYSTEME ET PROCEDE D'ESTIMATION DE LA TRANSMURALITE DE LESIONS D'ABLATION

10/TI/16 (Item 16 from file: 349)

METHOD AND SYSTEM FOR A SELF-GUIDED MEDICAL DEVICE
PROCEDE ET SYSTEME POUR DISPOSITIF MEDICAL AUTOGUIDE

10/TI/17 (Item 17 from file: 349)

APPARATUS FOR THERMAL TREATMENT OF AN INTERVERTEBRAL DISC
DISPOSITIF DESTINE AU TRAITEMENT THERMIQUE D'UN DISQUE INVERTEBRAL

10/TI/18 (Item 18 from file: 349)

REMOTELY INTERROGATED MEDICAL IMPLANT WITH SENSOR

IMPLANT MEDICAL INTERROGE A DISTANCE EQUIPE D'UN DETECTEUR

10/TI/19 (Item 19 from file: 349)

SYSTEM AND METHOD FOR EXAMINING, RECORDING AND ANALYSING DERMATOLOGICAL CONDITIONS
SYSTEME ET PROCEDE D'EXAMEN, D'ENREGISTREMENT ET D'ANALYSE DE TROUBLES DERMATOLOGIQUES

10/TI/20 (Item 20 from file: 349)

TREATMENT OF TISSUE BY APPLICATION OF ENERGY AND DRUGS
TRAITEMENT DES TISSUS PAR L'APPLICATION D'ENERGIE ET DE MEDICAMENTS

10/TI/21 (Item 21 from file: 349)

SENSING, INTERROGATING, STORING, TELEMETERING AND RESPONDING MEDICAL IMPLANTS
IMPLANTS MEDICAUX PERMETTANT LA TELEMETRIE, LA REPONSE, LE STOCKAGE, L'INTERROGATION ET LA DETECTION

10/TI/22 (Item 22 from file: 349)

REMOTELY INTERROGATED DIAGNOSTIC IMPLANT DEVICE WITH ELECTRICALLY PASSIVE SENSOR
DISPOSITIF IMPLANTE PERMETTANT UN DIAGNOSTIC, POUVANT ETRE INTERROGE A DISTANCE ET DOTE D'UN CAPTEUR ELECTRIQUEMENT PASSIF

10/TI/23 (Item 23 from file: 349)

INTERVENTIVE-DIAGNOSTIC DEVICE
DISPOSITIF DE DIAGNOSTIC PAR INTERVENTION

10/TI/25 (Item 25 from file: 349)

REMOTELY INTERROGATED DIAGNOSTIC IMPLANT DEVICE WITH ELECTRICALLY PASSIVE SENSOR
DISPOSITIF D'IMPLANT DIAGNOSTIQUE INTERROGE A DISTANCE DOTE D'UN DETECTEUR PASSIF ELECTRIQUE

10/TI/26 (Item 26 from file: 349)

VAGINAL PROBE HAVING AN IMPROVED SENSOR ARRAY AND METHOD OF USING SAME
SONDE VAGINALE POURVUE D'UN RESEAU DE CAPTEURS AMELIORE ET METHODE D'UTILISATION DE CELLE-CI

10/TI/28 (Item 28 from file: 349)

METHOD AND APPARATUS FOR SIGNAL TRANSMISSION AND DETECTION USING A CONTACT DEVICE
PROCEDE ET APPAREIL DE TRANSMISSION DE SIGNAUX ET DE DETECTION UTILISANT UN DISPOSITIF DE CONTACT

10/TI/29 (Item 29 from file: 349)

FUNCTIONAL BRAIN IMAGING FROM MAGNETOENCEPHALOGRAPHIC DATA
IMAGERIE FONCTIONNELLE DU CERVEAU A PARTIR DE DONNES MAGNETOENCEPHALOGRAPHIQUES

10/TI/30 (Item 30 from file: 349)

PHYSIOLOGICAL PARAMETER MONITORING AND BIO-FEEDBACK APPARATUS
DISPOSITIF DE SURVEILLANCE DE PARAMETRES PHYSIOLOGIQUES ET DE RETROACTION BIOLOGIQUE

10/TI/31 (Item 31 from file: 349)

MULTIPLE ELECTRODE ABLATION APPARATUS AND METHOD
DISPOSITIF ET PROCEDE D'ABLATION AU MOYEN DE PLUSIEURS ELECTRODES

10/TI/32 (Item 32 from file: 349)

NON-INVASIVE SENSING OF A PHYSICAL PARAMETER
DETECTION NON INVASIVE D'UN PARAMETRE PHYSIQUE

10/TI/33 (Item 33 from file: 349)

ANEURYSM PATCH APPARATUS AND METHOD FOR TREATING AN ANEURYSM
DISPOSITIF A PATCH ET PROCEDE DE TRAITEMENT DE L'ANEVRISME

10/TI/34 (Item 34 from file: 349)

REDUCED-NOISE CATHETER
CATHETER A BRUIT REDUIT

10/TI/35 (Item 35 from file: 349)

METHOD AND SYSTEM FOR NEURAL TISSUE MODIFICATION
PROCEDE ET SYSTEME POUR LA MODIFICATION DE TISSU NERVEUX

10/TI/36 (Item 36 from file: 349)

ABLATION APPARATUS AND SYSTEM FOR REMOVAL OF SOFT PALATE TISSUE
DISPOSITIF ET PROCEDE D'ABLATION PERMETTANT DE RETIRER LE TISSU VELO-PALATIN

10/TI/37 (Item 37 from file: 349)

GEOMETRICALLY ENHANCED MAGNETORESISTANCE IN TRILAYER TUNNEL JUNCTIONS
MAGNETORESISTANCE ACCRUE GEOMETRIQUEMENT DANS DES JONCTIONS TUNNEL A TROIS COUCHES

10/TI/38 (Item 38 from file: 349)

MATRICES WITH MEMORIES, SENSORS WITH MEMORIES AND USES THEREOF
MATRICES A MEMOIRES, CAPTEURS A MEMOIRES ET UTILISATIONS CORRESPONDANTES

10/TI/39 (Item 39 from file: 349)

APPARATUS FOR ABLATION OF A SELECTED MASS
APPAREIL D'ABLATION D'UNE MASSE SELECTIONNEE

10/TI/41 (Item 41 from file: 349)

ELECTRICAL POWER AMPLIFIER FOR CONTINUOUS CARDIAC OUTPUT MONITORING
AMPLIFICATEUR DE PUISSANCE ELECTRIQUE POUR DISPOSITIF DE SURVEILLANCE EN CONTINU DU DEBIT CARDIAQUE

10/TI/42 (Item 42 from file: 349)

MONITORING EQUIPMENT

```
Set     Items   Description
S1     188374   SENSOR? ?
S2     686024   TEMPERATURE? ? OR HEAT OR COLD OR COLDNESS OR THERMOMET? OR
              THERMO()(METRE? ? OR METER? ?)
S3     240072   MAGNETI? OR MAGNETO? OR ELECTROMAGNETI? OR ELECTROMAGNETO?
S4        484   WIEGAND
S5     318605   RESISTANCE OR OHM? ?
S6     206455   VOLTAGE OR VOLT? ?
S7       3672   S1(S)S2(S)S3
S8         44   S7(S)(S4 OR S5 OR S6) AND IC=A61B
S9         44   IDPAT (sorted in duplicate/non-duplicate order)
S10        43   IDPAT (primary/non-duplicate records only)
? show files
File 348:EUROPEAN PATENTS 1978-2003/Jan W03
         (c) 2003 European Patent Office
File 349:PCT FULLTEXT 1979-2002/UB=20030116,UT=20030109
         (c) 2003 WIPO/Univentio
```

Biblio NPL

13/5/7 (Item 7 from file: 2)
DIALOG(R)File 2:INSPEC

6003898 INSPEC Abstract Number: B9810-7320R-005
Title: Temperature measurement: Making sense of it all
Author(s): Volbrecht, A.
Author Affiliation: Watlow Gordon, Richmond, IL, USA
Journal: Sensors vol.15, no.6 p.41-4
Publisher: Helmers Publishing,
Publication Date: June 1998 Country of Publication: USA
CODEN: SNSRES ISSN: 0746-9462
SICI: 0746-9462(199806)15:6L.41:TMMS;1-B
Material Identity Number: P585-98007
Language: English Document Type: Journal Paper (JP)
Treatment: General, Review (G); Practical (P)
Abstract: Selection of the right **temperature sensor** depends on the process being measured, the **temperature** range stipulated, the response time desired, the accuracy required, and the operating environment encountered. Another important factor to consider is price, which varies with the accuracy rate and the mounting style of the device. **Temperature sensors** generate output signals in one of two ways: through a change in output **voltage** or through a change in **resistance** of the **sensor** 's electrical circuit. Thermocouples and IR devices generate **voltage** output signals. RTDs and thermistors output signals via a change in **resistance** . There are two methods of **temperature** sensing: contact and noncontact. Contact sensing brings the **sensor** into physical contact with the substance or object being measured; this approach suits solids, liquids, or gases. Noncontact sensing reads **temperature** by intercepting a portion of the **electromagnetic** energy emitted by an object or substance and detecting its intensity; this technology is applicable to solids and liquids. This primer gives the basics of the primary technologies available in order to aid with selection of the correct **sensor** for particular applications. (0 Refs)

13/5/13 (Item 13 from file: 2)
DIALOG(R)File 2:INSPEC

4734709 INSPEC Abstract Number: A9418-7450-033, B9409-3240C-030
Title: Measurement of the I-V characteristics of superconducting dipoles: automatic compensation of low frequency drift
Author(s): Lesquey, E.; Gire, F.; Dolabdjian, C.; Chok Sing, M.L.; Robbes, R.
Journal: Journal de Physique IV (Colloque) vol.4, no.C6 p. C6/199-204
Publication Date: June 1994 Country of Publication: France
CODEN: JPICEI ISSN: 1155-4339
Conference Title: First European Workshop on Low Temperature Electronics. WOLTE 1
Conference Sponsor: Inst. Nat. Polytechnique; CNRS; Direction Recherches Etudes Tech.; et al
Conference Date: 29 June-1 July 1994 Conference Location: Grenoble, France
Language: English Document Type: Conference Paper (PA); Journal Paper

(JP)
Abstract: Superconducting microbridges and Josephson junctions showing RSJ-like I-V characteristics have potential applications through their current (I) dependences, at fixed bias **voltage** (V), on various parameters such as **temperature** (T), **magnetic** field (B) or incident optical power (P). The main problem associated with both low values of **voltage** (mu V-mV range) and dynamic **resistance** Rd (0.1-10 Omega range) was solved earlier; however, the measurement system still suffers from excessive 1/f noise due to static biasing conditions if neither the incoming signals nor the preamplifier can be chopped. The authors have overcome this difficulty through the use of a periodic sampling of four points of the I-V characteristic taking advantage of the odd symmetry of this characteristic. In each period, two of the samples occur in the superconducting state and give the zero **voltage** reference of the measurement system. This allows them to automatically compensate for the low frequency drifts occurring at preamplifier level. The two other periodic samples, opposite in sign, must appear symmetric with respect to the zero **voltage** reference at the preamplifier output. This constraint is also used to automatically compensate for the low frequency drifts of the AC square signal which controls the I-V operating point. For example, a high Tc superconducting microbridge, used as a **temperature** **sensor** , has an equivalent low frequency drift of 0.4 mK/sub pp/ and 6 mK/sub pp/ respectively with and without the automatic control. (5 Refs)

13/5/22 (Item 22 from file: 2)
DIALOG(R)File 2:INSPEC

02880314 INSPEC Abstract Number: B87035245
Title: Oval wheel counter as volume transmitter with magnetic field controlled sensor (Wiegand sensor)
Author(s): Feil, H.J.
Journal: Messen Pruefen Automatisieren no.9 p.520-4
Publication Date: Sept. 1986 Country of Publication: West Germany
CODEN: MPAUEV ISSN: 0177-7297
Language: German Document Type: Journal Paper (JP)
Treatment: Practical (P)
Abstract: The **sensor** is based on the **Wiegand** principle: **heat** treatment and mechanical operation of Fe-Ni or Fe-V-Cr-Ni alloy wires produce a **magnetically** hard outer layer with a soft **magnetic** core. External **magnetic** fields can switched the domains so that-in one direction-up to 12 V is generated in the external **sensor** coil. The concentrically arranged **Wiegand** -wires are switched by the permanent magnets built into one of the rotating, oval wheel pair, the pulses picked up by the **sensor** coil. Mechanical and constructional details, application areas, technical data of the commercial version of the volume transmitter are included. (5 Refs)

13/5/23 (Item 23 from file: 2)
DIALOG(R)File 2:INSPEC

02859917 INSPEC Abstract Number: B87029048
Title: Compensating temperature-induced sensitivity changes in thin film NiFeCo magnetoresistive magnetometers

Author(s): Hoffman, G.R.; Hill, E.W.; Birtwistle, J.K.
Author Affiliation: Electr. Eng. Labs., Manchester Univ., UK
Journal: IEEE Transactions on Magnetics vol.MAG-22, no.5 p.949-51
Publication Date: Sept. 1986 Country of Publication: USA
CODEN: IEMGAQ ISSN: 0018-9464
U.S. Copyright Clearance Center Code: 0018-9464/86/0900-0949$01.00
Conference Title: 1986 International Magnetics Conference (INTERMAG)
Conference Sponsor: IEEE
Conference Date: 14-17 April 1986 Conference Location: Phoenix, AZ, USA
Language: English Document Type: Conference Paper (PA); Journal Paper (JP)
Abstract: The **temperature** dependence of the sensitivity and **resistance** of **magnetoresistive** thin-film **magnetic** **sensors** has been investigated. **Magnetoresistive** **sensors** were fabricated from a range of zero- **magnetorestrictive** NiFeCo alloys with cobalt contents between 0 and 25 wt.%. In the **temperature** range considered (0 to 60 degrees C) the sensitivity was found to fall and the **resistance** to rise almost linearly for all of the alloys. The response of the **sensor** to an externally applied field is proportional to its supply **voltage** . In the simple case of true complementary correspondence between the **temperature** coefficients of device **resistance** and sensitivity, a constant-current drive would achieve perfect **temperature** compensation of sensitivity. For all alloys where the degree of divergence between the **temperature** **resistance** and **temperature** characteristics is known, electronic control systems incorporating this relationship may be used to provide inherently accurate **temperature** compensation. (2 Refs)

13/5/29 (Item 29 from file: 2)
DIALOG(R)File 2:INSPEC

01820147 INSPEC Abstract Number: B82016931
Title: Motion measurement with the magnetic field sensor
Journal: Elektro-Anzeiger vol.34, no.12 p.32-3
Publication Date: June 1981 Country of Publication: West Germany
CODEN: EKANAJ ISSN: 0013-5518
Language: German Document Type: Journal Paper (JP)
Treatment: Applications (A); Practical (P)
Abstract: A description of some uses of the Doduco 'Dodopuls' **magnetic** field **sensor** , based upon the **Wiegand** effect. The latter refers to the production of **voltage** impulses in a coil by a nearby short ferromagnetic wire having a hard shell and a soft core, and subjected to repeated reversals of a strong **magnetic** field, as produced by a permanent magnet. The merits of this **sensor** are: no energizing **voltage** , no semiconductors, appreciable signal **voltage** (0.5 to 8 V, according to use), no standstill **voltage** , high S/N ratio, lock-free and bounce-free, amplitude virtually frequency-independent, applicable as a bistable **magnetic** element of non-transient memory, very large operating **temperature** range (-196 to +175 degrees C), short-circuit proof. The half-value response approximately=20 mu s. Symmetrical and asymmetrical pulse production is possible, the latter giving the larger signal **voltage** . The Dodopuls form is realized in 2 sizes of DIL housings (15 & 30 mm lengths) with an impedance of 500 to 1000 Omega and DC **resistance** of 25 to 50 Omega . Saturation and re-settling permanent magnets of electromagnets are used. (0 Refs)

13/5/37 (Item 37 from file: 2)
DIALOG(R)File 2:INSPEC

01083598 INSPEC Abstract Number: B77028987
Title: The 'Wiegand effect' enables various devices to be operated with the minimum of electric power
Author(s): Buj, J.
Journal: Revista Espanola de Electronica vol.24, no.267 p.14-17
Publication Date: Feb. 1977 Country of Publication: Spain
CODEN: RVEEBT ISSN: 0482-6396
Language: Spanish Document Type: Journal Paper (JP)
Treatment: Applications (A)
Abstract: Describes how **Wiegand** , by adequately tempering a steel thread produced a coercive force on its surface as strong as that at its centre which could be used to change the direction of the **magnetic** field at the centre. This effect can be produced by very short wires which therefore can be arranged as **magnetic** pulse generators to produce pulses of constant amplitude in one or both directions capable of operation in extreme **temperatures** . After discussing permanent magnets and coils as alternative types of **sensors** the author describes pulsing equipment operating at 720 RPM with reading heads requiring no electric power, a card reader for extracting the information from indestructible cards using **Wiegand** wires and a key using the principle to set off an alarm. The author discusses the theories of **magnetism** underlying the effect. (0 Refs)

13/5/41 (Item 2 from file: 6)
DIALOG(R)File 6:NTIS

1662737 NTIS Accession Number: DE92009379
Assessment of diagnostic methods for solenoid-operated valves
Kryter, R. C. ; Farmer, W. S.
Oak Ridge National Lab., TN.
Corp. Source Codes: 021310000; 4832000
Sponsor: Department of Energy, Washington, DC.
Report No.: CONF-920375-3
1992 24p
Languages: English Document Type: Conference proceeding
Journal Announcement: GRAI9219; ERA9238
Aging research information conference, Rockville, MD (United States), 24-27 Mar 1992. Sponsored by Department of Energy, Washington, DC.
Country of Publication: United States
Contract No.: AC05-84OR21400
Solenoid-operated valves (SOVs) were studied at Oak Ridge National Laboratory as part of the USNRC Nuclear Plant Aging Research (NPAR) Program. The primary objective of the study was to identify, evaluate, and recommend methods for inspection, surveillance, monitoring, and maintenance of SOVs that can help ensure their operational readiness -- that is, their ability to perform required safety functions under all anticipated operating conditions, since failure of one of these small and relatively inexpensive devices could have serious consequences under certain circumstances. Intrusive techniques requiring the addition of **magnetic** or acoustic **sensors** or the application of special test signals were investigated briefly, but major emphasis was placed on the examination of condition-indicating techniques that can be applied with minimal cost and

impact on plant operation. These include monitoring coil mean **temperature** remotely by means of coil dc **resistance** or ac impedance, determining valve plunger position by means of coil ac impedance, verifying unrestricted SOV plunger movement by measuring current and **voltage** at their critical bistable (pull-in and drop-out) values, and detecting the presence of shorted turns or insulation breakdown within the solenoid coil using interrupted-current test methods. Experimental results are presented that demonstrate the technical feasibility and praticality of the monitoring techniques assessed in the study, and recommendations for further work are provided.

13/5/42 (Item 3 from file: 6)
DIALOG(R)File 6:NTIS

1659293 NTIS Accession Number: DE92010121
Tuned-circuit dual-mode Johnson noise thermometers
Shepard, R. L. ; Carroll, R. M. ; Falter, D. D. ; Blalock, T. V. ; Roberts, M. J.
Oak Ridge National Lab., TN.
Corp. Source Codes: 021310000; 4832000
Sponsor: Department of Energy, Washington, DC.
Report No.: CONF-920423-2
1992 11p
Languages: English Document Type: Conference proceeding
Journal Announcement: GRAI9218; ERA9236
International symposium on temperature: its measurement and control in science and industry (7th), Toronto (Canada), 28 Apr - 1 May 1992. Sponsored by Department of Energy, Washington, DC.
Country of Publication: United States
Contract No.: AC05-84OR21400

Dual-mode Johnson noise and dc **resistance** **thermometers** can be used in control systems where prompt indications of **temperature** changes and long-term accuracy are needed. Such a **thermometer** is being developed for the SP-100 space nuclear electric power system that requires **temperature** measurement at 1400 K in space for 10 years, of which 7 are expected to be at full reactor power. Several direct-coupled and transformer-coupled, tuned **resistance** -inductance-capacitance (RLC) circuits that produce a single, continuous **voltage** signal were evaluated for noise **temperature** measurement. The simple direct-coupled RLC circuit selected provides a mean-squared noise **voltage** that depends only on the capacitance used and the **temperature** of the **sensor** , and it is independent of the value of or changes in the **sensor** **resistance** . These circuits provide a noise signal with long-term accuracy but require integrating noise signals for a finite length of time. The four-wire resistor for the noise **temperature** **sensor** allows simultaneous dc **resistance** measurements to be made that provide a prompt, continuous **temperature** indication signal. The dc current mode is employed continuously, and a noise **voltage** measurement is made periodically to correct the **temperature** indication. The differential noise **voltage** preamplifier used substantially reduces **electromagnetic** interference (EMI) in the system. A **sensor** has been tested that should provide good performance ((plus minus)1% accuracy) and long-term (10-y) reliability in space environments. Accurate noise **temperature** measurements were made at **temperatures** above 1300 K, where significant insulator shunting occurs, even though shunting does affect the dc **resistance** measurements and makes the system more susceptible to EMI. 14

refs.

13/5/47 (Item 3 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03937972 E.I. No: EIP94081376960
Title: Nonlinear finite element model of the electrode-electrolyte-skin system
Author: Panescu, D.; Webster, J.G.; Stratbucker, R.A.
Corporate Source: E P Technologies, Incorporated, Sunnyvale, CA, USA
Source: IEEE Transactions on Biomedical Engineering v 41 n 7 Jul 1994. p 681-687
Publication Year: 1994
CODEN: IEBEAX ISSN: 0018-9294
Language: English
Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)
Journal Announcement: 9410W4
Abstract: This study presents a two-dimensional finite element model of the electrode-electrolyte-skin system which takes into account the nonlinear behavior of the skin with respect to the amplitude of the **voltage** . The nonlinear modeling approach has practical value for studies related to transcutaneous stimulation (e.g. maximizing the dynamic range of **sensory** substitution systems, optimization of TENS, optimization of transcutaneous cardiac pacing, etc.). The model has three main regions: 1) the electrolyte; 2) the skin; and 3) the body. The model consists of 364 nodes, 690 elements and was generated on a MacIntosh II using a version of FEHT (Finite Element for **Heat** Transfer) adapted for **electromagnetics** . The electrodes are equipotential lines and the electrolyte is modeled as a pure resistive region with constant conductivity. Although the electrode-electrolyte interface can introduce nonlinearities, we did not take them into account because the skin displays a much higher impedance. The skin is modeled as a nonlinear material with the conductivity dependent on the applied **voltage** . To account for the mosaic structure of the skin, we used ten different nonlinear subregions of five different values of breakdown **voltage** . The region designated 'body' models the effects of the **resistance** associated with the dermis and the tissues underneath the skin, and has a constant high conductivity. We studied the effects of two different electrolytes on the comfort of stimulation and found that there was less potential pain delivered when high-resistivity electrolytes were used. This was due to the larger nonuniformities in the current density distribution which appeared for low-resistivity electrolytes. Moreover, increasing the skin **temperature** made the current density even more nonuniformly distributed for low-resistivity electrolytes. Experiments performed on the skin of the left arm, using 1-cm**2 Ag-AgCl electrodes, showed that the skin broke down at spots of lowest breakdown **voltage** . This is consistent with reports of previous experimental studies and has practical value for the design of optimal electrodes. (Author abstract) 18 Refs.

13/5/51 (Item 7 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

02834506 E.I. Monthly No: EIM8912-045753

Title: 1988 Conference on Precision Electromagnetic Measurements (CPEM'88).

Author: Okamura, Sogo; Noda, Ken-Ichi; Dziuba, Ronald F. (Ed.)

Corporate Source: NBS (US), Electricity Div, Washington, DC, USA

Conference Title: 1988 Conference on Precision Electromagnetic Measurements (CPEM'88)

Conference Location: Tsukuba, Jpn Conference Date: 19880607

Sponsor: IEEE, Instrumentation and Measurement Soc, New York, NY, USA; Union Radio Scientifique Internationale (URSI), Brussels, Belg; NBS (US), Washington, DC, USA; AIST, Tokyo, Jpn; Science Council of Japan, Jpn; et al

E.I. Conference No.: 12391

Source: IEEE Transactions on Instrumentation and Measurement v 38 n 2 Apr 1989. Publ by IEEE, IEEE Service Center, Piscataway, NJ, USA. p 130-714

Publication Year: 1989

CODEN: IEIMAO ISSN: 0018-9456

Language: English

Document Type: CP; (Conference Proceedings) Treatment: X; (Experimental); T; (Theoretical); A; (Applications)

Journal Announcement: 8912

Abstract: This issue contains 114 conference papers. Some of the specific topics discussed are: the atomic mass unit; a measurement of the NBS electrical watt in SI units; quantized Hall **resistance** measurements; a 10- **volt** Josephson **voltage** standard; precision ac measurement of **temperature** below 90 K; optical frequency standards; on-fiber **sensor** and modulator; optical fiber feedback SQUID **magnetometer** ; in search of best clock; and design of Kalman smoothers for global positioning system data. All papers are separately indexed and abstracted.

13/5/54 (Item 2 from file: 34)

DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

03307008 Genuine Article#: NU914 Number of References: 5

Title: MEASUREMENT OF THE IV CHARACTERISTICS OF SUPERCONDUCTING DIPOLES - AUTOMATIC COMPENSATION OF LOW-FREQUENCY DRIFT

Author(s): LESQUEY E; GIRE F; DOLABDJIAN C; SING MLC; ROBBES R

Corporate Source: ISMRA UNIV,ELECTR & INSTRUMENTAT LAB,6.BD MARECHAL JUIN/F-14050 CAEN//FRANCE/

Journal: JOURNAL DE PHYSIQUE IV, 1994, V4, NC6 (JUN), P199-204

ISSN: 1155-4339

Language: ENGLISH Document Type: ARTICLE

Geographic Location: FRANCE

Subfile: SciSearch; CC PHYS--Current Contents, Physical, Chemical & Earth Sciences

Journal Subject Category: PHYSICS

Abstract: Superconducting microbridges and Josephson junctions showing RSJ-like I-V characteristics have potential applications through their current I dependences, at fixed bias **voltage** V, versus various parameters such as **temperature** (T), **magnetic** field (B) or incident optical power (P)... The main problem associated with both low values of **voltage** (muV-mV range) and dynamic **resistance** Rd (0.1-10OMEGA range) was solved earlier; however, the measurement system still suffers from excessive 1/f noise due to static biasing conditions if neither the incoming signals nor the preamplifier can be chopped. We have overcome this difficulty through the use of a periodic sampling of

four points of the I-V characteristic taking advantage of the odd symmetry of this characteristic. In each period, two of the samples occur in the superconducting state and give the zero **voltage** reference of the measurement system. This allows us to automatically compensate for the low frequency drifts occuring at preamplifier level. The two other periodic samples, opposite in sign, must appear symmetric with respect to the zero **voltage** reference at the preamplifier output. This constraint is also used to automatically compensate for the low frequency drifts of the ac square signal which controls the I-V operating point. For example, a high Tc superconducting microbridge, used as a **temperature** **sensor** , has an equivalent low frequency drift of 0.4 mK(pp) and 6 mk(pp) respectively with and without the automatic control.

13/5/56 (Item 2 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04644354 JICST ACCESSION NUMBER: 00A0689840 FILE SEGMENT: JICST-E
Robust Sensor-less Control of BLDCM via Block-Pulse Functions Expression.
HARA HIDEHIRO (1); HANAMOTO TSUYOSHI (2); TSUJI TERUO (2); TANAKA YOSHIAKI (3); OGURO RYUICHI (4)
(1) Nishinippon Inst. of Technol.; (2) Kyushu Inst. of Technol.; (3) Kitakyushu Natl. Coll. of Technol.; (4)Yasukawa Electr. Corp.
Denki Gakkai Ronbunshi. D(Transactions of the Institute of Electrical Engineers of Japan. D), 2000, VOL.120-D,NO.7, PAGE.884-890, FIG.14, TBL.2, REF.7
JOURNAL NUMBER: X0451AAJ ISSN NO: 0913-6339
UNIVERSAL DECIMAL CLASSIFICATION: 621.313.13 621.314.5
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: This paper examined the robustness of former presented estimation method, that is made under very simple assumption of that, during short period of PWM control both electrical angle and electrical speed of AC servo-motor do not vary. In each PWM periods control input is known, currents is measurable, then position and speed as parameters can be solved. Over 0.06(p.u.) of speed command estimated position and speed had good accuracy, and smooth **sensor** -less control was achieved. Under 0.06(p.u.) of speed command, 6-th harmonics in estimated position became harmful then correction using the Newton's Method is taken. Even these correction effort residues of correction error could not diminished. To reduce the effects of correction error, feed-forward **voltage** in control inputs are employed and gains of feedback was low downed. On this estimation, machine parameters, armature **resistance** and reactance are supposed as constant. But they may be change according to **temperature** rise and **magnetic** saturation. Moreover they includes some errors. Even these problems under very short PWM interval changes of estimated EMFs are small enough then machine parameters disappear from estimate equation. Then this estimation method is robust from parameter changes. This estimation method stands on estimation of back EMFs. Then it can not apply on zero speed. But experimental result shows a **sensor** -less start up under proposed estimation method without any other equipment is capable without any auxiliary equipment. (author abst.)

14/5/1 (Item 1 from file: 2)
DIALOG(R)File 2:INSPEC

01389391 INSPEC Abstract Number: A79073355
Title: A fast response superconducting thin-film probe for detection of second-sound shock waves in superfluid helium
Author(s): Borner, H.; Schmidt, D.W.; Wagner, W.J.
Journal: Cryogenics vol.19, no.2 p.89-92
Publication Date: Feb. 1979 Country of Publication: UK
CODEN: CRYOAX ISSN: 0011-2275
Language: English Document Type: Journal Paper (JP)
Treatment: Experimental (X)
Abstract: Fast response probes are needed for studying the formation and propagation of second-sound shock waves (and for applying such waves to special measuring purposes) in superfluid helium. Newly developed superconducting thin-film probes enable shock-front rise times of down to 0.3 mu s to be detected as signal-to-noise ratios higher than about 100. Using high vacuum evaporation techniques, such probes are relatively easy to produce. Their main **body** consists of cylindrical quartz glass rod 1.5 mm in diameter with one end face polished to a plane of optical quality. The **sensor** strip is deposited onto this plane face as a two-component film of 0.02 mm width and 1 mm length. The **temperature** variations due to second sound cause changes in the **resistance** of the film and thus, at constant bias current variations of the **voltage** drop across it. The **temperature** where the film undergoes its steep transition to superconductance and where, therefore, the probe works at its greatest sensitivity, is primarily fixed by the ratio of the two components (tin and gold) of the film, but can be adjusted to special values via the **magnetic** field produced by the adjustable bias current. (0 Refs)
Subfile: A
Descriptors: electric sensing devices; probes; second sound; shock waves; superconducting devices; superfluid helium-4
Identifiers: superfluid helium; high vacuum evaporation techniques; sensor strip; temperature variations; resistance; constant bias current; voltage drop; superconductance; second sound shock waves; Sn; superconducting thin films probe; Au; shock front rise time; signal to noise ratio; superfluid He
Class Codes: A0670D (Sensing and detecting devices); A0720M (Cryogenics); A6740P (Transport processes, second and other sounds, and thermal counterflow); A7490 (Other topics in superconductivity)

14/5/2 (Item 1 from file: 6)
DIALOG(R)File 6:NTIS

0838316 NTIS Accession Number: AD-A086 700/2/XAB
Telemetry System for Evaluation of Burn Protection in Full-Scale Fuel Fire Manikin Exposures
(Final rept)
Piergallini, J. R. ; Stoll, A. M.
Naval Air Development Center, Warminster, PA. Aircraft and Crew Systems Technology Directorate.
Corp. Source Codes: 032381022; 393532
Report No.: NADC-80092-60
1 May 80 11p
Languages: English
Journal Announcement: GRAI8022

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Country of Publication: United States
Contract No.: F61542; ZF61542001
An eighteen channel PAM/FM (Pulse Amplitude Modulated/Frequency Modulated) telemetry system was developed for measuring **temperature** rise on the surface of a manikin beneath protective clothing for full-scale fuel fire exposures in completely enveloping flames. Thermistors are used as **temperature sensors** at various locations on a manikin surface and backed by material of known thermal properties in order to correlate **temperature** rise with skin burn damage. The transmitted signals are recorded on analog **magnetic** tape and converted to a digital format for computer analysis. The clothed manikin is passed through an aviation gasoline fire for three seconds with the telemetry system recording data during this period. **Temperatures** are analyzed at 0, 1, 2 and 3-second intervals with **voltage** outputs from the thermistors being converted to **resistance** readings and **temperature** readings by equations developed from curves of thermistor characteristics. Experimental results with respect to burn prediction are in agreement with data obtained by analysis of vesicant papers calibrated radiometrically to correlate with **temperature** -time effects productive of burns in living tissue. To date, 12 full-scale fuel fire tests have been conducted using the telemetry system and the performance of this system has exceeded original expectations in many respects such as sensitivity, accuracy and freedom from interference by ionizing gases within the flames. (Author)
Descriptors: *Telemeter systems; *Test and evaluation; *Burns(Injuries); *Protective clothing; Detectors; Analog computers; Computer aided diagnosis ; Flames; Thermal properties; Fires; Test equipment; Exposure suits; Gasoline; Digital systems; Temperature; Experimental data; Gases; Recording systems
Identifiers: Manikins; Burn protection; Skin burn damage; NTISDODXA
Section Headings: 95D (Biomedical Technology and Human Factors Engineering--Human Factors Engineering); 45C (Communication--Common Carrier and Satellite)

14/5/3 (Item 1 from file: 8)
DIALOG(R)File 8:Ei Compendex(R)

03937972 E.I. No: EIP94081376960
Title: Nonlinear finite element model of the electrode-electrolyte-skin system
Author: Panescu, D.; Webster, J.G.; Stratbucker, R.A.
Corporate Source: E P Technologies, Incorporated, Sunnyvale, CA, USA
Source: IEEE Transactions on Biomedical Engineering v 41 n 7 Jul 1994. p 681-687
Publication Year: 1994
CODEN: IEBEAX ISSN: 0018-9294
Language: English
Document Type: JA; (Journal Article) Treatment: A; (Applications); T; (Theoretical)
Journal Announcement: 9410W4
Abstract: This study presents a two-dimensional finite element model of the electrode-electrolyte-skin system which takes into account the nonlinear behavior of the skin with respect to the amplitude of the **voltage** . The nonlinear modeling approach has practical value for studies

related to transcutaneous stimulation (e.g. maximizing the dynamic range of **sensory** substitution systems, optimization of TENS, optimization of transcutaneous cardiac pacing, etc.). The model has three main regions: 1) the electrolyte; 2) the skin; and 3) the **body** . The model consists of 364 nodes, 690 elements and was generated on a MacIntosh II using a version of FEHT (Finite Element for **Heat** Transfer) adapted for **electromagnetics** . The electrodes are equipotential lines and the electrolyte is modeled as a pure resistive region with constant conductivity. Although the electrode-electrolyte interface can introduce nonlinearities, we did not take them into account because the skin displays a much higher impedance. The skin is modeled as a nonlinear material with the conductivity dependent on the applied **voltage** . To account for the mosaic structure of the skin, we used ten different nonlinear subregions of five different values of breakdown **voltage** . The region designated ' **body** ' models the effects of the **resistance** associated with the dermis and the tissues underneath the skin, and has a constant high conductivity. We studied the effects of two different electrolytes on the comfort of stimulation and found that there was less potential pain delivered when high-resistivity electrolytes were used. This was due to the larger nonuniformities in the current density distribution which appeared for low-resistivity electrolytes. Moreover, increasing the skin **temperature** made the current density even more nonuniformly distributed for low-resistivity electrolytes. Experiments performed on the skin of the left arm, using 1-cm**2 Ag-AgCl electrodes, showed that the skin broke down at spots of lowest breakdown **voltage** . This is consistent with reports of previous experimental studies and has practical value for the design of optimal electrodes. (Author abstract) 18 Refs.

Descriptors: *Functional electric stimulation; Finite element method; Electrodes; Electrolytes; Skin

Identifiers: Nonlinear finite element models; Electrode-electrolyte-skin system; Transcutaneous stimulation

Classification Codes:

461.1 (Biomedical Engineering); 921.6 (Numerical Methods); 704.2 (Electric Equipment)

461 (Biotechnology); 921 (Applied Mathematics); 704 (Electric Components & Equipment)

46 (BIOENGINEERING); 92 (ENGINEERING MATHEMATICS); 70 (ELECTRICAL ENGINEERING)

14/5/4 (Item 1 from file: 94)

DIALOG(R)File 94:JICST-EPlus

04943363 JICST ACCESSION NUMBER: 01A0589819 FILE SEGMENT: JICST-E

Non-invasive Temperature Monitoring Using Small Coils During Radio-frequency Heating.

HASEGAWA T (1); GU Y-H (1); USHIBA H (1); HARA K (1); ANDOU S (1); HASHIMOTO T (1); NOHARA Y (1); HASEGAWA T (2); YAMAMOTO I (3)

(1) Suzuka Univ. Medical Sci., Mie, Jpn; (2) Accelerator Engineering Co, Chiba, Jpn; (3) Yamamoto Vinyter Co, Osaka, Jpn

Nippon Haipasamia Gakkaishi(Japanese Journal of Hyperthermic Oncology), 2001, VOL.17,NO.1, PAGE.33-43, FIG.9, REF.9

JOURNAL NUMBER: L0930AAZ ISSN NO: 0911-2529

UNIVERSAL DECIMAL CLASSIFICATION: 616-006-08+

LANGUAGE: English COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: In hyperthermic treatment of malignant tumors, thermal tissue

injury increases dramatically with every degree that the tissue increases above 42.5.DEG.C.. Accurate **temperature** monitoring during hyperthermia is important. Generally, tissue **temperature** is monitored by inserting **sensors** into the target tissue; however, the painful procedure is not tolerated by some **patients** . We devised a non-invasive method to monitor tissue **temperature** during radio-frequency hyperthermia. The method functions by detecting the **magnetic** field induced by the radio-frequency currents that flow through the heated tissue. This technique uses small multi-channel coil antennas to detect radio-frequency currents and generates a two-dimensional image of their distribution in the tissue. The **temperature** distribution was estimated from the **temperature** increase and the intensity of the current of the radio frequency. A 4% agar phantom was used as a model for target tissue receiving hyperthermic treatment. Around the agar phantom, 16 small coils were arranged in a ring. A rectifying circuit and a leveling circuit were connected to each coil antenna, and the current was converted with a fixed **resistance** into **voltage** . Since the **voltage** output from each antenna was attenuated at 1/2.PI.r(r: distance from the radio-frequency current), single-peaked projection data were prepared. After treatment with various signals, radio-frequency currents that flowed through the heated object were determined as a two-dimensional current distribution profile by back-projection. When the insertion of an iron rod into the agar phantom produced a hot spot, the current distribution was examined and compared with the two-dimensional **temperature** distribution evaluated by thermography. A good correlation was observed between the distribution of radio-frequency currents detected by the coil antennas and the **temperature** distribution detected by thermography.... (author abst.)

DESCRIPTORS: hyperthermia; thermometry; inductor; temperature distribution; phantom; monitoring

BROADER DESCRIPTORS: physical therapy; therapy; measurement; circuit component; parts; distribution; biomodel; model

CLASSIFICATION CODE(S): GE03036S

14/5/5 (Item 2 from file: 94)

DIALOG(R)File 94:JICST-EPlus

04644354 JICST ACCESSION NUMBER: 00A0689840 FILE SEGMENT: JICST-E

Robust Sensor-less Control of BLDCM via Block-Pulse Functions Expression.

HARA HIDEHIRO (1); HANAMOTO TSUYOSHI (2); TSUJI TERUO (2); TANAKA YOSHIAKI (3); OGURO RYUICHI (4)

(1) Nishinippon Inst. of Technol.; (2) Kyushu Inst. of Technol.; (3) Kitakyushu Natl. Coll. of Technol.; (4)Yasukawa Electr. Corp.

Denki Gakkai Ronbunshi. D(Transactions of the Institute of Electrical Engineers of Japan. D), 2000, VOL.120-D,NO.7, PAGE.884-890, FIG.14, TBL.2, REF.7

JOURNAL NUMBER: X0451AAJ ISSN NO: 0913-6339

UNIVERSAL DECIMAL CLASSIFICATION: 621.313.13 621.314.5

LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan

DOCUMENT TYPE: Journal

ARTICLE TYPE: Original paper

MEDIA TYPE: Printed Publication

ABSTRACT: This paper examined the robustness of former presented estimation method, that is made under very simple assumption of that, during short period of PWM control both electrical angle and electrical speed of AC servo-motor do not vary. In each PWM periods control input is known, currents is measurable, then position and speed as parameters can be

solved. Over 0.06(p.u.) of speed command estimated position and speed had good accuracy, and smooth **sensor** -less control was achieved. Under 0.06(p.u.) of speed command, 6-th harmonics in estimated position became harmful then correction using the Newton's Method is taken. Even these correction effort residues of correction error could not diminished. To reduce the effects of correction error, feed-forward **voltage** in control inputs are employed and gains of feedback was low downed. On this estimation, machine parameters, armature **resistance** and reactance are supposed as constant. But they may be change according to **temperature** rise and **magnetic** saturation. Moreover they includes some errors. Even these problems under very short PWM interval changes of estimated EMFs are small enough then machine parameters disappear from estimate equation. Then this estimation method is robust from parameter changes. This estimation method stands on estimation of back EMFs. Then it can not apply on zero speed. But experimental result shows a **sensor** -less start up under proposed estimation method without any other equipment is capable without any auxiliary equipment. (author abst.)

DESCRIPTORS: servomotor; brushless system; DC motor; power converter; rotor ; position; angular velocity; state estimation; robustness; block pulse function; cylinder; field system; parameter; fluctuation and variation

BROADER DESCRIPTORS: control equipment; equipment; method; DC machine; electric machine; machinery; electric power equipment; motor; electric converter; converter; velocity; mechanical quantity; system identification; identification; recognition; estimation; system characteristic; characteristic; function(mathematics); mapping(mathematics); hollow **body** ; solid(cubic); magnetic pole

CLASSIFICATION CODE(S): NB07030U; NB08030B

13/TI/1 (Item 1 from file: 2)
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Title: Design parameter optimization for Hall sensor application

13/TI/2 (Item 2 from file: 2)
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Title: Mechanical-sensorless robust control of permanent-magnet synchronous motor using phase information of harmonic reactive power

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Title: Properties of the commercially available magnetoresistive sensor KMZ10A in the temperature range between 50 and 290 K

13/TI/10 (Item 10 from file: 2)

Title: Voltage-controlled colossal magnetoresistance in manganite/normal-metal heterostructures

13/TI/11 (Item 11 from file: 2)

Title: First experiments with the ohmic H mode on the TUMAN-3M tokamak

13/TI/12 (Item 12 from file: 2)

Title: Mercury-based cuprate high-transition temperature grain-boundary junctions and SQUIDs operating above 110 Kelvin

13/TI/14 (Item 14 from file: 2)

Title: Temperature-insensitive offset reduction in a Hall effect device

13/TI/15 (Item 15 from file: 2)

Title: A fail-safe sensor for flame detection

13/TI/16 (Item 16 from file: 2)

Title: Superconductive Electronics Conference

13/TI/17 (Item 17 from file: 2)

Title: Magnetic semiconductor protector with self-contained multisensor

13/TI/18 (Item 18 from file: 2)

Title: Multi-ability sensor module using a temperature-sensitive magnetic semiconductor with humidity dependence

13/TI/19 (Item 19 from file: 2)

Title: Wheel rotation sensor for use in a navigation/location system

13/TI/20 (Item 20 from file: 2)

Title: Magnetosensitive displacement sensor-a noncontact type sensor

13/TI/21 (Item 21 from file: 2)

Title: Design and installation of instruments in the Westinghouse LCP coil

13/TI/24 (Item 24 from file: 2)

Title: Shorts due to diagnostic leads

13/TI/25 (Item 25 from file: 2)

Title: Jitter-less pulse generator elements using amorphous bistable wires

13/TI/26 (Item 26 from file: 2)

Title: Behaviour of semiconductor low temperature sensors in electromagnetic environments

13/TI/27 (Item 27 from file: 2)

Title: Sensors in the motor vehicle

13/TI/28 (Item 28 from file: 2)

Title: Sensitive digital sensors using amorphous bistable magnetostrictive ribbons

13/TI/30 (Item 30 from file: 2)

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Title: Magnetic field dependent sensor

13/TI/31 (Item 31 from file: 2)
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Title: Wiegand wire-a new magnetic sensor

13/TI/32 (Item 32 from file: 2)
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Title: Sensors, sensors (automobile indicators)

13/TI/33 (Item 33 from file: 2)
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Title: The Wiegand effect and its applications

13/TI/34 (Item 34 from file: 2)
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13/TI/36 (Item 36 from file: 2)
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Title: Magneto-resistive current sensor for DC high-speed circuit breaker

13/TI/38 (Item 38 from file: 2)
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Title: Experimental characteristics of magnetoresistive sensors for locating cylindrical magnetic domains

13/TI/39 (Item 39 from file: 2)
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Title: Temperature compensation of fluxgate magnetometers

13/TI/40 (Item 1 from file: 6)
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International Conference on Electrical Machines (ICEM 2000), Volume 2. Held in Espoo, Finland on August 28-30, 2000

13/TI/43 (Item 4 from file: 6)
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Tuned-Circuit Johnson Noise Thermometry

13/TI/44 (Item 5 from file: 6)
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Telemetry System for Evaluation of Burn Protection in Full-Scale Fuel Fire Manikin Exposures
(Final rept)

13/TI/45 (Item 1 from file: 8)
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Title: Coulomb blockade thermometry and other aspects of tunnel junction arrays

13/TI/46 (Item 2 from file: 8)
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Title: Wiegand effect sensors: Theory and applications

13/TI/48 (Item 4 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Magnetoresistive sensors

13/TI/49 (Item 5 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Wiegand effect sensors.

13/TI/50 (Item 6 from file: 8)
DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

Title: Instrumentation and Measurements Technical Conference (IMTC '89).

13/TI/52 (Item 8 from file: 8)

DIALOG(R)File 8:(c) 2003 Elsevier Eng. Info. Inc. All rts. reserv.

Title: WIEGAND EFFECT: A NEW PULSE-GENERATING OPTION.

13/TI/53 (Item 1 from file: 34)
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Title: High-performance InAs quantum well based Corbino magnetoresistive sensors on germanium substrates

13/TI/55 (Item 1 from file: 94)
DIALOG(R)File 94:(c)2003 Japan Science and Tech Corp(JST). All rts. reserv.

Non-invasive Temperature Monitoring Using Small Coils During Radio-frequency Heating.

13/TI/57 (Item 3 from file: 94)
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Recent Progress and Research Subjects in Spin Tunnel Junctions.

13/TI/58 (Item 4 from file: 94)
DIALOG(R)File 94:(c)2003 Japan Science and Tech Corp(JST). All rts. reserv.

Colpitts-Oscillator-Type Micro-Magnetic Sensor Using Amorphous MI Elements.

13/TI/59 (Item 5 from file: 94)
DIALOG(R)File 94:(c)2003 Japan Science and Tech Corp(JST). All rts. reserv.

A Study on a Commercial Pressure Sensor Based on Poly-Crystalline Silicon Gauges at Cryogenic Temperatures under Magnetic Fields.

13/TI/60 (Item 6 from file: 94)
DIALOG(R)File 94:(c)2003 Japan Science and Tech Corp(JST). All rts. reserv.

Compensating Secondary Resistance of an Induction Motor in Vector Control.

13/TI/61 (Item 7 from file: 94)
DIALOG(R)File 94:(c)2003 Japan Science and Tech Corp(JST). All rts. reserv.

Vector control and various control methods of an induction motor.

13/TI/62 (Item 8 from file: 94)
DIALOG(R)File 94:(c)2003 Japan Science and Tech Corp(JST). All rts. reserv.

Basic characteristics of thick film magnetic semiconductor and application to multipurpose sensor.

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Set     Items   Description
S1    1233535   SENSOR? ?
S2    6883773   TEMPERATURE? ? OR HEAT OR COLD OR COLDNESS OR THERMOMET? OR
              THERMO()(METRE? ? OR METER? ?)
S3    3442007   MAGNETI? OR MAGNETO? OR ELECTROMAGNETI? OR ELECTROMAGNETO?
S4        228   WIEGAND
S5    2294809   RESISTANCE OR OHM? ?
S6     943003   VOLTAGE OR VOLT? ?
S7       5784   S1(S)S2(S)S3
S8         15   S7(S)S4
S9         91   S7(S)S5(S)S6
S10       105   S8 OR S9
S11        65   RD (unique items)
S12        62   S11 NOT PY>2001
S13        62   S12 NOT PD>20010615
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11/3,K/15 (Item 10 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

01528676 20010608165
Colossal magnetoresistive La(ind 0.7)(Pb(ind 1-x)Sr(ind x))(ind 0.3)MnO(ind 3) films for bolometer and magnetic sensor applications
Lisauskas, A; Back, J; Khartsev, SI; Grishin, AM
Dept. of Condensed Matter Phys., R. Inst. of Technol., Stockholm, S
Eighth Joint Magnetism and Magnetic Materials Intermag Conference, 7-11 Jan. 2001, San Antonio, TX, USAJournal of Applied Physics, v89, n11, pt.1-2, pp6961-6963, 2001
Document type: journal article; 06 Conference paper Language: English
Record type: Abstract
ISSN: 0021-8979

ABSTRACT:
We report on electrical and **magnetic** properties of a continuous series of solid solutions La(ind 0.7)(Pb(ind 1...

...tailor the metal-to-semiconductor phase transition from 266 to 327 K, the maximum of **temperature** coefficient of **resistance** from 10.2% K(exp -1) to 3.2% K(exp -1), and maximum of **magnetoresistance** ratio at 7 kOe from 41% to 17% for x=0 and x=1 correspondingly...
...epitaxial quality of the fabricated films. Using these films, an infrared radiation bolometer and weak **magnetic** field **sensor** have been built and tested. The bolometer resolves the noise equivalent **temperature** difference as low as 120 nK/ square root Hz at 30 Hz frame frequency, while the **magnetic** field **sensor** shows the noise equivalent **magnetic** field difference of 50 mu Oe/ square root Hz at 1 kHz and optimum bias **magnetic** field applied.

11/3,K/21 (Item 16 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

01507407 20010309914
Remote temperature sensing system using reverberated magnetic flux
Kim, YH; Hashi, S; Ishiyama, K; Arai, KI; Inoue, M
Dept. of Electr. Eng., Pukyong Univ., Pusan, ROK
INTERMAG 2000 Digest of Technical Papers. 2000 IEEE International Magnetics Conference, 9-13 April 2000, Toronto, Ont., CanadaIEEE Transactions on Magnetics, v36, n5, pt.1, pp3643-3645, 2000
Document type: journal article; 06 Conference paper Language: English
Record type: Abstract
ISBN: 0-7803-5943-7
ISSN: 0018-9464

ABSTRACT:
A remote **temperature** sensing system was investigated. The system can measure the **temperature** by applying an external **magnetic** flux to the **sensor** and by receiving a flux at the resonant frequency corresponding to the **temperature** at the **sensor** . The **sensor** does not need a power supply within it and is only composed of a **temperature** sensitive ferrite core and a wound coil. The inductance of the core varied from about 8-18 mH in the **temperature** region of 35-55 degrees C. The induced **voltage** , Delta V by the **sensor** was about 10 mV for a 260 mm length between the transmitter and receiver. The...

11/3,K/22   (Item 17 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

01505314 20010501287
Electrical noise in ultra thin giant magnetoresistors
Lisauskas, A; Khartsev, SI; Grishin, AM; Palenskis, V
Royal Inst of Technology, Stockholm, S
MRS Spring Meeting - Symposium BB: 'Multicomponent Oxide Films for Electronics', Apr 6-Apr 8 1999, San Francisco, CA, USAMaterials Research Society Symposium - Proceedings, v574, n1-2, pp365-370, 1999
Document type: Conference paper Language: English
Record type: Abstract
ISBN: 1-55899-481-5
ISSN: 0272-9172

ABSTRACT:
...series of La(ind 0.75)Sr(ind 0.25)MnO(ind 3) (LSMO) giant **magnetoresistive** thin epitaxial films with thickness of 42, 50, 100, and 600 angstroms. Fabricated manganite films experience semiconductor-normal metal (paramagnetic-ferromagnetic) phase transition with the **temperature** change. The transition manifests itself by the sharp change of resistivity and characteristic peak of **magnetoresistivity** . Thickness decrease results in lowering the transition **temperature** and increasing of resistivity. The noise spectra has 1/f(exp alpha) behavior with alpha approximately = 1+/-0.2. The **voltage** fluctuations spectral density shows quadratic dependence on current indicating that observed noise is caused by the **resistance** fluctuations. Noise level, **temperature** coefficient of resistivity and **magnetoresistance** increase for thin films. Therefore, the operation point (transition **temperature**) can be tailored from 330 K to 220 K by changing only the film thickness while the performance of **temperature** and **magnetic** field LSMO **sensors** can be maintained almost constant in thickness range down to 100 angstroms.

11/3,K/33   (Item 28 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

01360202 I99112033300
Highly stable MI micro sensor using CMOS IC multivibrator with synchronous rectification (for automobile control application)
Kawajiri, N; Nakabayashi, M; Cai, CM; Mohri, K; Uchiyama, T
Dept. of Electr. Eng., Nagoya Univ., J
Digests of INTERMAG 99. 1999 IEEE International Magnetics Conference, 18-21 May 1999, Kyongju, South KoreaIEEE Transactions on Magnetics, v35, n5, pt.2, pp3667-3669, 1999
Document type: journal article; 06 Conference paper Language: English
Record type: Abstract
ISBN: 0-7803-5555-5
ISSN: 0018-9464

ABSTRACT:
A new highly stable **magneto** -impedance (MI) micro **magnetic** **sensor** with a pair of zero- **magnetostrictive** amorphous wires is presented. The **sensor** picks up a first pulse in an induced oscillatory pulse **voltage** at a wire coil using an analog switch. High **temperature** stability in the MI **sensor** is established in which zero drift for **temperature** variation from 20

degrees C to 80 degrees C is 0.6%/FS (0.01.%/FS degrees C). The highly stable MI **sensor** will be useful for application to automobile controls.

11/3,K/71 (Item 66 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

00863128 E95036077012
Integrated MR sensors for automobile
(Integrierte magnetfeldabhaengige Widerstandssensoren fuer Kraftfahrzeuge)
Akiyama, O; Konno, H; Inami, D; Kuraishi, Y
NEC Kawasaki, J; NEC Miyagi, J
IEEE Transactions on Magnetics, v30, n6,1, pp4617-4619, 1994
Document type: journal article Language: English
Record type: Abstract
ISSN: 0018-9464

ABSTRACT:
Integrated **magneto resistance** (MR) **sensors** were developed which use not only a bridge circuit but also integrating technique with semiconductors. They have four or more elements used for **magneto** electric transducer. Previously, such kind of integrated **magnetic sensors** used to have **magnetic** -electric transducers in the form of bridge circuit by MR elements only. Hence, the amplitude of **sensor** 's output solely depended on the **magneto resistance** change ratio of the MR elements. In the newly developed MR **sensors** it is 3.7 times more effective than the conventional ones. Thin film that reveals large **magneto resistance** often has defect such as large saturation field, **magneto** -striction, low resistivity, etc. However, by means of NiFe thin film and specific integrating technique, these new MR **sensors** showed excellent **temperature** characteristics up to 150 deg C.

11/3,K/77 (Item 72 from file: 95)
DIALOG(R)File 95:TEME-Technology & Management

00830832 E94100164302
CMOS magnetic-field sensor system
(Ein in CMOS-Technik ausgefuehrtes Magnetfeldsensorsystem)
Sprotte, A; Buckhorst, R; Brockherde, W; Hosticka, BJ; Bosch, D
Fraunhofer Inst. of Microelectronic Circuits a. Syst., Duisburg, D; Hanning Oerlinghausen, D; Dt. Aerospace, Ottobrunn, D
IEEE Journal of Solid-State Circuits, v29, n8, pp1002-1005, 1994
Document type: journal article Language: English
Record type: Abstract
ISSN: 0018-9200

ABSTRACT:
A **magnetic** -field **sensor** system integrated in CMOS technology with additional processing steps necessary for **sensor** fabrication is presented. The system contains a **magnetoresistive** permalloy microbridge acting as a **sensor** , **temperature** compensation circuitry, programmable readout electronics, reference **voltage** bias, and clock generation. It features maximum **magnetic** flux sensitivity of 70 mV/microT (corresponds to the **magnetic** -field sensitivity of 88.2 mV/(A/m) my(ind r) = 1) and its **temperature** gain is below 260 ppm/deg C in the range between -50 deg C and...

11/3,K/95 (Item 4 from file: 370)
DIALOG(R)File 370:Science

00507031 (USE 9 FOR FULLTEXT)
The Magnetic Stability of Spin-Dependent Tunneling Devices
Gider, S.; Runge, B.-U.; Marley, A. C.; Parkin, S. S. P.
IBM Research Division, Almaden Research Center, 650 Harry Road, K11/D2, San Jose, CA 95120-6099, USA.
Science Vol. 281 5378 pp. 797
Publication Date: 8-07-1998 (980807) Publication Year: 1998
Document Type: Journal ISSN: 0036-8075
Language: English
Section Heading: Reports
Word Count: 2694

(THIS IS THE FULLTEXT)

Text: **Magnetic** thin films are currently the basis of information storage technology (B1) . Generally, disk media are **magnetically** hard alloys of Co, and read/write **sensors** are predominantly soft alloys of Ni and Fe, such as Permalloy (Ni.inf(81)Fe.inf(19)). Before the introduction of charge memory devices, such as dynamic RAM, **magnetic** thin films were considered as an alternative to **magnetic** core memories (B2) . The discovery of **magnetoresistive** (MR) effects that are much greater in heterostructures (B3) (B4) than MR effects in homogenous films has led to a renewed interest in **magnetic** memory devices. **Magnetic** memory is inherently nonvolatile and does not require periodic refreshing, as do charge memory devices...

...the two FM layers are antiparallel, the probability of electron tunneling is low and the **resistance** R is high because for a given electron spin state in one layer, there are...

...eventually demagnetize the reference layer and effectively erase the memory of the tunnel junction. A **magnetic** tunnel junction memory requires a reference layer that is stable over millions of M reversals...

...switch the layer. The hysteresis loop of the reference layer can also be widened or **magnetically** hardened by alloying it. We studied the stability of exchange-biased and hard layers by...

...each 6400 (mu) m.sup(2) in area, with leads and contacts for four-point **resistance** measurements and simultaneously defined 1.5 mm by 6.0 mm areas for M measurements...

...albeit on different areas of the structure. All of the measurements were performed at room **temperature** .

...simulate the writing of bits, we repeatedly reversed M of the free layer with a **magnetic** field that was large enough to saturate the free layer but was too small to...

...not due to eddy current heating. However, when the extrinsic cycling time approaches the intrinsic **magnetic** -switching time (on the order of nanoseconds), the decay is expected to become frequency-dependent...

...layer. The thicker hard layers may be rougher and may produce more pinning sites for **magnetic** domains in the free layer, thereby increasing the coercivity of the free layer...

...layer is induced by coupling with the free layer. The effect is therefore distinct from **magnetization** creep, which is the slow formation of domains of opposite M in homogenous layers that are cycled with a field along the **magnetic** hard axis and a constant field along the easy axis (B10...

...as a function of the conductor thickness (B4) (B11) . In addition, there is roughness-induced **magnetostatic** coupling, which dominates the interaction between FM layers that are separated by an insulator (B12... ...orange peel" coupling arises from correlated roughness between the two layers. Along the interface, the **magnetic** dipole interaction will favor the alignment of M in a peak of one layer with...explanation, we reversed the moment of the free layer by a coherent rotation of its **magnetic** moment without the formation of domain walls; at 10 Hz, the sample was rotated about its surface, normal in a fixed homogenous **magnetic** field of 200 Oe, which was applied in the plane of the sample. The magnitude...

...demagnetizing fields from the domain walls in the free layer must depend on the detailed **magnetic** structure of the domain walls. Thus, it would not be surprising if the M decay...

...consequently, the strength of the demagnetizing field would also depend on both M and the **magnetic** anisotropy of the free layer. However, it is difficult to probe the domain wall structure. In a **magnetic** force microscope, the stray field from the **magnetic** tip disturbs the structure of the **magnetically** soft free layers in our structures. Instead, we have carried out plan-view Lorentz transmission...

...are observed between the Co and NiFe layers, it is difficult to resolve the detailed **magnetic** structure of the domain walls because only the in-plane component of M produces contrast the **resistance** at a particular field H and R.inf(S) is the **resistance** at saturation, where the M's of the two layers are parallel. The corresponding M...

...to negative fields, and thin curves represent the field swept from negative to positive fields. **Electromagnetic** unit, emu...

...the free layers, plotted on a logarithmic scale. The curves are normalized by the remanent **magnetization** M.inf(R), set at 5000 Oe before cycling or rotating. The error in the **magnetization** measurement is approximately the size of the plotted points. (In order to reach a million ...

...13) hard layer and the Al.inf(2)O.inf(3) tunneling barrier enhances the **magnetoresistance** but does not alter the threshold for decay. The actual layer thicknesses and compositions are...

11/TI/1 (Item 1 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Phacomatosis Pigmentokeratotica Report of New Cases and Further Delineation of the Syndrome (ARTICLE)

11/TI/2 (Item 2 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

The H-reflex to Magnetic Stimulation of Lower-Limb Nerves (Article)

11/TI/3 (Item 3 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Posttraumatic Pontine Truncal Sensory Level (letters to the editor) (Letter to the Editor)

11/TI/4 (Item 4 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

A Translation of Otto Binswanger's Article, The Delineation of the Generalized Progressive Paralyses' (Article)

11/TI/5 (Item 5 from file: 442)
DIALOG(R)File 442:(c)2003 Amer Med Assn -FARS/DARS apply. All rts. reserv.

Magnetoencephalography; Applications in Psychiatry (COMMENT)

11/TI/6 (Item 1 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Fiber optic acoustic emission sensors for harsh environment health monitoring

11/TI/7 (Item 2 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Integrated motor drive unit, a mechatronics packaging concept for automotive electronics
(Integrierte Antriebseinheit - Ein mechatronisches Verpackungskonzept fuér elektronische Bauteile in Kraftfahrzeugen)

11/TI/8 (Item 3 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Novel macroporous silicon structures as light emission and sensor elements

11/TI/9 (Item 4 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Temperature-compensated "flat-pack" fiber optic strain gage: design and

fabrication

11/TI/10 (Item 5 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Fiber optic sensors for predictive health monitoring

11/TI/11 (Item 6 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Pulsed laser-deposited amorphous magnetic films for strain detection

11/TI/12 (Item 7 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Mechanical-sensorless robust control of permanent-magnet synchronous motor using phase information of harmonic reactive power

11/TI/13 (Item 8 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Hall-magnetometry on ferromagnetic dots and dot arrays

11/TI/14 (Item 9 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Direct magnetic imaging of ferromagnetic domain structures by room temperature scanning hall probe microscopy using a bismuth micro-hall probe
(Magnetische Abbildung ferromagnetischer Domaenen mittels Hall-Mikroskopie)

11/TI/16 (Item 11 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Magnetic sensors for automotive applications

11/TI/17 (Item 12 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Magnetic field sensors from polycrystalline manganites

11/TI/18 (Item 13 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Magnetoelastic sensor based on GMI of amorphous microwire

11/TI/19 (Item 14 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Thermal modeling of magnetoresistive heads in three dimensions

11/TI/20 (Item 15 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Titel japanisch
(Entwicklung von nichtrostenden Sinterstaehlen und neue Anwendungen fuer Fahrzeugbauteile)
(Development of sintered stainless steels and new applications for automotive parts)

11/TI/23 (Item 18 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Development and application of magnetic field sensors based on high-temperature superconductors

11/TI/24 (Item 19 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Fluxgate-magnetometer for the detection of deep lying defects
(Fluxgate-Magnetometer zum Nachweis tiefer liegender Fehler)

11/TI/25 (Item 20 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Near field hybrid recording with a mode index waveguide lens

11/TI/26 (Item 21 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Finite element and Monte Carlo modeling of the electrical and thermal properties of high areal density MR read-back heads

11/TI/27 (Item 22 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Emerging applications of intermetallics
(Kommende Anwendungen fuer intermetallische Legierungen)

11/TI/28 (Item 23 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Polydiacetelene fiber optic pressure sensors
(Faseroptische Drucksensoren aus polydiacetylenbeschichteten Fasern)

11/TI/29 (Item 24 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Behavior of carbon ceramic TVO temperature sensors at static magnetic fields up to 15 T

11/TI/30 (Item 25 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Demonstration of a new principle for an active electromagnetic pressure sensor

11/TI/31 (Item 26 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

High magnetoresistance in sputtered Permalloy thin films through growth on seed layers of (Ni(ind 0.81)Fe(ind 0.19))(ind 1-x)Cr(ind x)

11/TI/32 (Item 27 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

High temperature superconducting devices on buffered silicon substrates

11/TI/34 (Item 29 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

High-performance high-T(ind c) SQUID sensors for multichannel systems in magnetically disturbed environment

11/TI/35 (Item 30 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Effect of an In(ind 1-x)Al(ind x)Sb buffer layer on InSb thin film mobility

11/TI/36 (Item 31 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Electro-optical voltage transformer

11/TI/37 (Item 32 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

High-performance InAs quantum well based Corbino magnetoresistive sensors on germanium substrates

11/TI/38 (Item 33 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Development of partial discharge monitor for turbine generators

11/TI/39 (Item 34 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Hall sensors based on heavily doped n-InSb thin films

11/TI/40 (Item 35 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Doping profiles for indium antimonide magnetoresistors

11/TI/41 (Item 36 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Observation of a new type of giant magnetoresistance with possible sensor applications

11/TI/42 (Item 37 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Observation of giant magnetoresistances in hybrid semiconductor/ferromagnetic devices

11/TI/43 (Item 38 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Fiber optic MEMS pressure sensors based on evanescent field interaction

11/TI/44 (Item 39 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Milestone developments in welding and joining processes

11/TI/45 (Item 40 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Double-Hall sensor with self-compensated offset

11/TI/46 (Item 41 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Electrical properties of nickel-zirconia cermet films for temperature- and flow-sensor applications

11/TI/47 (Item 42 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Smart vibration sensor using giant magnetostrictive materials
(Ein smarter Schwingungssensor mit einem magnetostriktiven Messaufnehmer)

11/TI/48 (Item 43 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

High current integrated microinductors and microtransformators using low temperature fabrication processes
(Integrierte Mikrospulen und -transformatoren fuer hohe Stroeme, hergestellt mit Hilfe von Niedertemperatur-Fertigungsprozessen)

11/TI/49 (Item 44 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Development of the spin-valve transistor

11/TI/50 (Item 45 from file: 95)

Thermally stable, low saturation field, low hysteresis, high GMR CoFe/Cu multilayers

11/TI/51 (Item 46 from file: 95)

CMR films structure as a function of growth and processing

11/TI/52 (Item 47 from file: 95)

Patterning of Cu, Co, Fe and Ag for magnetic nanostructures

11/TI/53 (Item 48 from file: 95)

Monolithic magnetic hall sensor using dynamic quadrature offset cancellation

11/TI/54 (Item 49 from file: 95)

Contactless potentiometer based on giant magnetoresistance sensors
(Beruehrungsloses Potentiometer auf Basis von Riesenmagnetowiderstandssensoren)

11/TI/55 (Item 50 from file: 95)

Three-axis cryogenic Hall sensor
(Drei-Achsen-Kryogen-Hall-Sensor)

11/TI/56 (Item 51 from file: 95)

Experimental and theoretical investigation of high-pressure arcs. I. The cylindrical arc column (two-dimensional modeling)
(Experimentelle und theoretische Untersuchung von Hochdrucklichtboegen. I. Die zylindrische Lichtbogensaeule (zweidimensionale Modelluntersuchung))

11/TI/57 (Item 52 from file: 95)

Modular middle-scale SQUID magnetometer system for neuromagnetic research
(Modulares SQUID-Magnetometersystem fuer die neuromagnetische Forschung)

11/TI/58 (Item 53 from file: 95)

Review of current status of smart structures and integrated systems
(Entwicklungsstand der smarten Werkstoffstrukturen und der integrierten Systeme)

11/TI/59 (Item 54 from file: 95)

The influence of ambient magnetic environments on high-T(ind c) superconducting quantum interference device gradiometers
(Der Einfluss magnetischer Umgebungen auf Hochtemperatur-supraleitende Quanten-Interferenzelement-Gradiometer)

11/TI/60 (Item 55 from file: 95)

Spin-valve heads utilizing antiferromagnetic NiO layers
(Spinventilkoepfe mit antiferromagnetischen NiO-Schichten)

11/TI/61 (Item 56 from file: 95)

Response of a new ceramic-oxynitride (Cernox) resistance temperature sensor **in high** magnetic **fields**
(Verhalten eines neuartigen keramischen Widerstandstemperatursensors (Cernox) in einem hochmagnetischen Feld)

11/TI/62 (Item 57 from file: 95)

Sensitive and quick response micro magnetic sensor using amorphous wire MI element Colpitts oscillator
(Empfindlicher und schnellansprechender mikromagnetischer Sensor mit einem induktiven Amorphdrahtelement im Colpitts-Oszillator)

11/TI/63 (Item 58 from file: 95)

Titel koreanisch
(Synthese und Messung der elektrischen Leitfaehigkeit von Ca(2+)-Ionenleitern auf der Basis von Calciumhexaaluminat)
(Synthesis and measurement of electrical conductivies of Ca(2+)-ion conductors based on calcium hexaluminate)

11/TI/64 (Item 59 from file: 95)

Application of distributed RC networks for realisation of thick-film temperature transducers
(Anwendung verteilter RC-Netze bei der Realisierung von Dickschichttemperaturwandlern)

11/TI/65 (Item 60 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Fiber optic magnetic sensor technology for undersea applications
(Faseroptische Magnetsensortechnologie fuer Unterwasseranwendungen)

11/TI/66 (Item 61 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Temperature rise tests on a forced-oil-air cooled (FOA) (OFAF) core-form transformer, including loading beyond nameplate
(Messung der Temperaturerhoehung von Kerntransformatoren mit Oel-Luft-Kuehlung bei verschiedenen Belastungen und Ueberlast)

11/TI/67 (Item 62 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Current measurement with magnetic sensors
(Strommessung mit Magnetsensoren)

11/TI/68 (Item 63 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Sensitive and quick response micro magnetic sensor utilizing magneto-impedance in Co-rich amorphous wires
(Ein empfindlicher schneller Mikromagnet-Sensor unter Ausnutzung des Magnet-Scheinwiderstands in kobaltreichen amorphen Draehten)

11/TI/69 (Item 64 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

CMOS integrated magnetic field source used as a reference in magnetic field sensors on common substrate
(In CMOS-Technik ausgefuehrte integrierte Magnetfeldquelle, die fuer Magnetfeldsensoren auf dem selben Substrat als Bezugswert dient)

11/TI/70 (Item 65 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Self-aligning 2-structure 'colour'-photolithography-process
(Ein selbsteinstellendes Verfahren der '2-Farben'-Photolithographie)

11/TI/72 (Item 67 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Design of platinum resistance thermometer with small magnetic field correction
(Entwicklung eines Platin-Widerstandsthermometer mit einer geringen Magnetfeldkorrektur)

11/TI/73 (Item 68 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Output voltage-excitation frequency characteristics of magnetic anisotropy sensor
(Ausgangsspannungsanregungsfrequenz-Eigenschaften von magnetisch anisotropen Sensoren)

11/TI/74 (Item 69 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Development and field experience with an HV-cable monitoring system
(Entwicklung und Feldversuche an einem Ueberwachungssystem fuer Hochspannungskabel)

11/TI/75 (Item 70 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

High Tc DC SQUIDs and planar coil fabrication
(Hochtemperatursupraleiter-Gleichstrom SQUIDs und Fertigung planarer Spulen)

11/TI/76 (Item 71 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

A low-noise CMOS preamplifier operating at 4.2 K
(Ein bei 4,2 K arbeitender rauscharmer CMOS-Vorverstaerker)

11/TI/78 (Item 73 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

A magneto-optic crystal based current measurement device
(Strommessungssensor auf der Basis eines magnetooptischen Kristalls)

11/TI/79 (Item 74 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Application of the Hall-probe technique for magnetization measurements of superconductors
(Anwendung der Hallsondentechnik fuer Magnetisierungsmessungen bei Supraleitern)

11/TI/80 (Item 75 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Application of optical fibres in power systems
(Die Anwendung optischer Fasern in Energiesystemen)

11/TI/81 (Item 76 from file: 95)
DIALOG(R)File 95:(c) 2003 FIZ TECHNIK. All rts. reserv.

Quick response field sensor using 200 MHz amorphous MI element FET multivibrator resonance oscillator
(Schneller Feldsensor unter Verwendung eines 200-MHz-FET-Multivibratorresonanzoszillator mit amorphem magnetoinduktivem

Element)

11/TI/82 (Item 77 from file: 95)

Properties of 410-L P/M stainless steel antilock brake sensor rings
(Eigenschaften von gesintertem nichtrostendem Stahl 410-L fuer Sensorringe in Antiblockiersystemen)

11/TI/83 (Item 78 from file: 95)

Magnetoresistive sensors
(Magnetoresitive Sensoren)

11/TI/84 (Item 79 from file: 95)

Fiber optic electric field micro-sensor
(Faseroptischer Mikrosensor fuer elektrische Felder)

11/TI/85 (Item 80 from file: 95)

Titel japanisch
(Entwicklung eines Waermekapazitaets-Messgeraetes unter Magnetfeldern (1). Magnetische Widerstandsaenderung und Anisotropie eines hochstabilen Duennfilm-Platin-Widerstandsthermometers, PTF-7)
(Development of a heat-capacity measurement system under magnetic-fields (1). Magneto-resistance and its anisotropy of a highly stable thin film platinum resistance thermometer, PTF-7)

11/TI/86 (Item 81 from file: 95)

Basic characteristics of thick film magnetic semiconductor and application to multipurpose sensor
(Magnetischer Dickschichthalbleiter und seine Anwendung bei Mehrzwecksensoren)

11/TI/87 (Item 82 from file: 95)

Possible design for a thin wire resistance thermometer with isotropic magnetoresistance
(Moeglicher Entwurf fuer ein Draht-Widerstandsthermometer mit isotropem magnetischen Widerstand)

11/TI/88 (Item 1 from file: 98)

Giant magnetoresistance at low fields in discontinuous NiFe-Ag multilayer thin films.

11/TI/89 (Item 1 from file: 149)
DIALOG(R)File 149:(c) 2003 The Gale Group. All rts. reserv.

Mercury-based cuprate high-tension temperature grain-boundary junctions and SQUIDs operating above 110 kelvin. (superconducting quantum interference devices)

11/TI/90 (Item 2 from file: 149)
DIALOG(R)File 149:(c) 2003 The Gale Group. All rts. reserv.

Toward the realization of a Josephson computer.

11/TI/91 (Item 3 from file: 149)
DIALOG(R)File 149:(c) 2003 The Gale Group. All rts. reserv.

Technological trends in automobiles.

11/TI/92 (Item 1 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Carbon Nanotube Actuators

11/TI/93 (Item 2 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Large Magnetoresistance of Electrodeposited Single-Crystal Bismuth Thin Films

11/TI/94 (Item 3 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Magnetoelectronics

11/TI/96 (Item 5 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Room Temperature-Operating Spin-Valve Transistors Formed by Vacuum Bonding

11/TI/97 (Item 6 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

The Radio-Frequency Single-Electron Transistor (RF-SET): A Fast and Ultrasensitive Electrometer

11/TI/98 (Item 7 from file: 370)
DIALOG(R)File 370:(c) 1999 AAAS. All rts. reserv.

Magnetic Field and Plasma Observations at Mars: Initial Results of the Mars Global Surveyor Mission

11/TI/99 (Item 8 from file: 370)

Probing Single Secretory Vesicles with Capillary Electrophoresis

11/TI/100 (Item 9 from file: 370)

Interplane Tunneling Magnetoresistance in a Layered Manganite Crystal

11/TI/101 (Item 10 from file: 370)

Bipartite Ca.sup(2+)-Binding Motif in C.inf(2) Domains of Synaptotagmin and Protein Kinase C

11/TI/102 (Item 11 from file: 370)

Striction-Coupled Magnetoresistance in Perovskite-Type Manganese Oxides

11/TI/103 (Item 12 from file: 370)

Biomimetic Templating of Porous Lamellar Silicas by Vesicular Surfactant Assemblies

11/TI/104 (Item 13 from file: 370)

Magnetic Clusters in Molecular Beams, Metals, and Semiconductors

11/TI/105 (Item 14 from file: 370)

Pairing Symmetry in Single-Layer Tetragonal Tl.inf(2)Ba.inf(2)CuO.inf(6+ (delta)) Superconductors

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Set     Items   Description
S1      67653   SENSOR? ?
S2     367482   TEMPERATURE? ? OR HEAT OR COLD OR COLDNESS OR THERMOMET? OR
              THERMO()(METRE? ? OR METER? ?)
S3     116583   MAGNETI? OR MAGNETO? OR ELECTROMAGNETI? OR ELECTROMAGNETO?
S4        231   WIEGAND
S5     132558   RESISTANCE OR OHM? ?
S6      58889   VOLTAGE OR VOLT? ?
S7        579   S1(S)S2(S)S3
S8        114   S7(S)(S4 OR S5 OR S6)
S9        110   RD (unique items)
S10       105   S9 NOT PY>2001
S11       105   S10 NOT PD>20010615
S12         0   S7(S)S4(S)S5(S)S6
? show files
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